THE
LANZA
FIRM
Experience & Value

May 19, 2017

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, Room N201
Harrisburg, PA 17120

RE: Level 3 Communications
Application for Authority to Offer, Render, Furnish, or Supply Telecommunications Services to the Public in the Commonwealth of Pennsylvania

Dear Secretary Chiavetta:

Enclosed for filing please find the Application of Level 3 Communications ("Level 3") to amend its certificate of public convenience to expand its service territory in Pennsylvania. The application seeks Commission approval of Level 3's proposed expansion into the service area of Mahanoy & Mahantongo Telephone Company.

As evidenced by the attached Certificate of Service, Level 3 is serving the application upon the statutory parties and the affected incumbent local exchange carrier. Level 3 believes that service of the application satisfies the need for public notice, and therefore, respectfully requests that the Commission waive any additional notice requirements or any supplemental requirement to publish notice of the application pursuant to 52 Pa. Code § 5.14(b).

If you have any questions or concerns, please contact me.

Sincerely,

Edward G. Lanza, Esq.
THE LANZA FIRM, LLC

Enclosures

cc: Carolyn Ridley

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of Level 3 Communications, LLC for Expanded Authority to offer, render, furnish or supply Telecommunications Services as a Competitive Local Exchange Carrier to the Public in the Commonwealth of Pennsylvania in the Service Territory of Mahanoy & Mahantango Telephone Company	Docket No. A-2017-_________

CERTIFICATE OF SERVICE

I, Edward G. Lanza, hereby certify that on this date I served a true and correct copy of the foregoing Application of Level 3 Communications, LLC at the above-captioned docket upon the parties listed below and in the manner set forth below.

VIA FIRST CLASS MAIL:

Office of Consumer Advocate
555 Walnut Street, 5th Floor
Harrisburg, PA 17101-1923

Office of Small Business Advocate
300 North 2nd Street, Suite 1102
Harrisburg, PA 17101

Office of Attorney General
Office of Consumer Protection
Strawberry Square
Harrisburg, PA 17120

TDS Telecom/M&M Tel. Co.
(Mahanoy & Mahantango)
P.O. Box 336, R.R. 01
Herndon, PA 17830

Date: May 19, 2017

Edward G. Lanza

Carolyn Ridley
Senior Director of State Public Policy
Level 3 Communications
2078 Quail Run Drive
Bowling Green, KY 42104
p: 615.584.7372
email: carolyn.ridley@level3.com

B) PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY (PEMA): The name, title, address, telephone number and FAX number of the person with whom contact should be made by PEMA (Pennsylvania Emergency Management Agency).

Michelle Scarboro
Planner
Network Planning & Implementation
Level 3 Communications
1025 Eldorado Blvd
Broomfield, CO 80021
p: 720.888.2979
Michelle.Scarboro@Level3.com

C) RESOLVING COMPLAINTS*:* Name, address, telephone number, and FAX number of the person and an alternate person responsible for addressing customer complaints. These persons will ordinarily be the initial point(s) of contact for resolving complaints and queries filed with the Public Utility Commission or other agencies***.***

Diane L. Peters
Senior Regulatory Affairs Manager
Level 3 Communications
225 Kenneth Drive
Rochester, NY 14623
p: 585.255.1425
f: 877.769.9844
e: diane.peters@level3.com

4. FICTITIOUS NAME:

The Applicant will not be using a fictitious name.

5. BUSINESS ENTITY AND DEPARTMENT OF STATE FILINGS:

The Applicant is a:
✓ ***Foreign limited liability company (15 Pa. C.S. §8981)**

*Provide name and address of Corporate Registered Office Provider or Registered Office within PA.

CT Corporation System
116 Pine Street
3rd Floor, Suite 320

Harrisburg, PA 17101
CLS-MountainPacificTeam@wolterskluwer.com
303-484-6280 fax
800-362-1228 phone

Attach proof of compliance with appropriate Department of State filing requirements as indicated above. Additionally, provide a copy of the Applicant's Articles of Incorporation or a Certificate of Organization.

The Applicant is incorporated in the State of Delaware. Attached hereto as Attachment 1 is a copy of Level 3's Certificate of Authority to Transact Business in Pennsylvania/Certificate of Good Standing and a copy of Level 3's Certificate of Formation.

Give name and address of officers:

Level 3's officers are:

Jeff Storey	**President & Chief Executive Officer**
Sunit Patel	**Executive Vice President and Chief Financial Officer**
Hector Alonso	**Regional President, Latin America**
Gary Breauninger	**Group Vice President, Global Accounts Management (GAM) Division**
Matthew Gutierrez	**Interim Regional President, EMEA Division**
Laurinda Pang	**Regional President, North America and Asia Pacific**
Anthony Christie	**Chief Marketing Officer**
John Ryan	**Executive Vice President, Chief Legal Officer & Secretary**
Andrew Dugan	**Chief Technology Officer**
Atilla Tinic	**Chief Information Officer**

Provided as evidence of Applicant's technical fitness to provide telecommunications services in the service area requested in this Application are the biographies of the Officers, attached hereto as Attachment 2. The address for the officers is:

**Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021
Tel: (720) 888-1000
Fax: (720) 888-5134**

6. AFFILIATES AND PREDECESSORS WITHIN PENNSYLVANIA:

❑ **The Applicant has affiliates doing business in Pennsylvania or predecessors which have done business in Pennsylvania. Name and address of the affiliates. State whether they are jurisdictional public utilities. Give docket numbers for the authority of such affiliates.**

If the Applicant or an affiliate has predecessors who have done business within Pennsylvania, give name and address of the predecessors and state whether they were jurisdictional public utilities. Give the docket numbers for the authority of such predecessors.

Application of:

Level 3 Communications, LLC

for approval to offer, render, furnish or supply telecommunications services to the public in the Commonwealth of Pennsylvania.

1. IDENTITY OF THE APPLICANT: The name, address, telephone number, and fax number of the Applicant.

Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021
phone: 720.888.1000
fax: 720.888.5134

Please identify any predecessors of the Applicant and provide other names under which the Applicant has operated within the preceding five years, including name, address, and telephone number.

Not applicable.

2. ATTORNEY: The name, address, telephone number, and fax number of the Applicant's attorney.

EDWARD LANZA
THE LANZA FIRM, LLC
P.O. BOX 61336
HARRISBURG, PA 17106
(717) 576-2696
(717) 798-9897 (FAX)
ed@lanzafirm.com

3. CONTACTS:

A) APPLICATION: The name, title, address, telephone number, and fax number of the person to whom questions about this application should be addressed.

EDWARD LANZA
THE LANZA FIRM, LLC
P.O. BOX 61336
HARRISBURG, PA 17106
(717) 576-2696
(717) 798-9897 (FAX)
ed@lanzafirm.com

AFFILIATES

Broadwing Communications, LLC - Docket Nos. A-311258F0002 and A-311258F0003
Global Crossing Telecommunications, Inc (IXC only) - Docket No. A-310112
Global Crossing Local Services, Inc. – Docket No. A-310703
TelCove Operations, LLC - Docket No. A-310923
WilTel Communications, LLC (IXC only) - Docket No. A-310690
tw telecom data services llc - Docket No. A-2008-2075535

1025 Eldorado Boulevard
Broomfield, Colorado 80021
phone: 720.888.1000
fax: 720.888.5134

7. AFFILIATES AND PREDECESSORS RENDERING PUBLIC UTILITY SERVICE OUTSIDE PENNSYLVANIA:

The Applicant has affiliates rendering or predecessors which rendered public utility service outside Pennsylvania. Name and address of the affiliates and predecessors (please identify affiliates versus predecessors).

AFFILIATES – address for all Affiliates is:

1025 Eldorado Boulevard
Broomfield, Colorado 80021
phone: 720.888.1000
fax: 720.888.5134

Broadwing Communications, LLC
Global Crossing Telecommunications, Inc (IXC only)
Global Crossing Local Services, Inc.
TelCove Operations, LLC
WilTel Communications, LLC (IXC only)
tw telecom state entities – See Attachment 8

8. APPLICANT'S PRESENT OPERATIONS: (Select and complete the appropriate statement)

The applicant is presently doing business in Pennsylvania as a:

- **Interexchange Toll Facilities-based carrier, InterLATA and/or IntraLATA, (e.g., MTS, 1+, 800, WATS, Travel and Debit Cards)**
- **Competitive Access Provider (dedicated point-to-point or multipoint service; voice or data)**
- **Competitive Local Exchange Carrier:**

  - Facilities-Based

9. APPLICANT'S PROPOSED OPERATIONS: The Applicant proposes to operate as:

- Interexchange Toll Facilities-based carrier, InterLATA and/or IntraLATA, (e.g., MTS, 1+, 800, WATS, Travel and Debit Cards)

- Competitive Access Provider (dedicated point-to-point or multipoint service; voice or data)

- Competitive Local Exchange Carrier:

- Facilities-based

10. **PROPOSED SERVICES**: Describe in detail the services which the Applicant proposes to offer. If proposing to provide more than one category in Item #9, clearly and separately delineate the services within each proposed operation. If proposing to operate as a facilities-based Competitive Local Exchange Carrier, provide a brief description of the Company's facilities.

The Applicant, Level 3 Communications, Inc. (NYSE: LVLT), is a Fortune 500 company that provides local, national and global communications services to enterprise, government and carrier customers. Level 3's comprehensive portfolio of secure, managed solutions includes fiber and infrastructure solutions; IPbased voice and data communications; wide-area Ethernet services; video and content distribution; data center and cloud-based solutions. Level 3 serves customers in more than 500 markets in over 60 countries across a global services platform anchored by owned fiber networks on three continents and connected by extensive undersea facilities.

Applicant seeks to expand the geographic area in which it has authority to provide all forms of competitive local exchange and competitive access telecommunications services. Please see the Attached copy of the SEC 10k Report (Attachment 3) for a fuller description of Level 3's services (pages 11 – 16).

11. **SERVICE AREA:** Describe the geographic service area in which the Applicant proposes to offer services. Clearly and separately delineate the service territory for each category listed in Item #9. For Competitive Local Exchange Carrier operations, you must name and serve the Incumbent Local Exchange Carriers in whose territory you request authority.

Applicant currently has authority to provide competitive local exchange services in the service territories of Verizon North, Inc., Verizon Pennsylvania, Inc., United Telephone Company of PA, Commonwealth Telephone Company, Communications of Breezewood, Frontier Communications of Breezewood, Frontier Communications of Lakewood, Palmerton Telephone Company, Denver & Ephrata Telephone Company, Frontier Communications of Pennsylvania, North Pittsburgh Telephone Company, Armstrong Telephone Company, Buffalo Valley Telephone Company, Conestoga Telephone & Telegraph Company, Ironton Telephone Company, Laurel Highland Telephone Company, North-Eastern Pennsylvania Telephone, Pymatuning Independent Telephone Company, Armstrong Telephone Company North, Citizens Telephone Company of Kecksburg, Frontier Communications of Canton, LLC, Citizens Telecom Company of New York, Lackawaxen Telecommunications Services, Inc., North Penn Telephone, South Canaan Telephone Company and requests additional authorization to provide services in the service territories of:

Mahanoy & Mahantongo Telephone Co

12. **MARKET:** Describe the customer base to which the Applicant proposes to market its services. Clearly and separately delineate a market for each category listed in Item #9.

Applicant proposes to provide competitive local exchange and competitive access telecommunications services to enterprise, government and carrier customers.

13. **PROPOSED TARIFF(S):** Each category of proposed operations must have a separate and distinct proposed tariff setting forth the rates, rules and regulations of the Applicant. Every proposed tariff shall state on its cover page the nature of the proposed operations described therein, i.e., IXC Reseller, CLEC, CAP, or IXC Facilities-based. A copy of all proposed tariffs must be appended to each original and duplicate original and copy of Form 377.

Please see attached as Attachment 4 the Applicant's proposed tariffs. The proposed tariffs attached hereto are being provided for illustrative purposes only. Level 3 is in the process of preparing tariffs that are compliant with the Commission's directive to file intrastate tariffs reflecting Step 6 of the FCC's ICC access reduction, and said tariffs will be filed by June 1, 2017. Upon Commission approval, Level 3 intends to amend this application to include proposed tariffs for the Mahanoy & Mahantango Telephone Company service area that reflect the Commission's approved changes.

14. **FINANCIAL*:*** ***Attach the following to the Application:***

A general description of the Applicant's capitalization and, if applicable, its corporate stock structure;

Level 3 is a limited liability company organized under Delaware law, and is wholly owned by its sole member, Level 3 Financing, Inc. (which was known as (i)Structure, Inc. and PKS Information Services, Inc.). Level 3 Financing, Inc. is wholly owned by Level 3 Communications, Inc., a publicly traded (NYSE: LVLT) company. Level 3 Communications, Inc. is a holding company whose primary business is the ownership of subsidiaries, directly and indirectly, that are engaged in the communications business. Please see the Attachment 3 for a copy of Level 3 Communications, Inc.'s most recent Annual Report on Form 10-K that was filed with the U.S. Securities and Exchange Commission for additional information.

Current balance sheet, Income Statement, and Cash Flow Statement of Applicant or Affiliated Company, if relying on affiliate for financial security;

Applicant has the financial resources to provide competitive local exchange, interexchange and competitive access services in the additional service area identified in this application. Applicant will rely upon the financial resources of its parent, Level 3 Communications, Inc. Please see Attachment 3 for a copy of Level 3 Communications, Inc.'s most recent SEC Form 10-K.

A tentative operating balance sheet and a projected income statement for the first year of operation within the Commonwealth of Pennsylvania; provide the name, title, address, telephone number and fax number of the Applicant's custodian for its accounting records and supporting documentation; and indicate where the Applicant's accounting records and supporting documentation are, or will be, maintained.

Applicant is currently operating in Pennsylvania under authority granted by the Commission. Please see provided as Attachment 5, a copy of Level 3 Communications, Inc.'s 1Q17 Earnings that highlights Level 3's 2017 financial guidance.

Applicant's custodian for its account records and supporting documentation is:
Eric Mortensen
Senior Vice President and Corporate Controller
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021
Tel: (720) 888-8286

Applicant will maintain its account records and supporting documentation at its corporate headquarters:
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021
Tel: (720) 888-1000
Fax: (720) 888-5134

If available, include bond rating, letters of credit, credit reports, insurance coverage and reports, and major contracts.

Please see provided as Attachment 6, the Rating Agency Reports for Moody's and Standard & Poor.

15. START DATE: **The Applicant proposes to begin offering services on or about 10/1/2016, or as soon as is practicable after receiving authorization from the Commission, in the service territory of South Canaan Telephone Company.**

16. FURTHER DEVELOPMENTS: Attach to the Application a statement of further developments - planned or contemplated - to which the present Application is preliminary or with which it forms a part, together with a reference to any related proceeding before the Commission.

Not applicable.

17. NOTICE: Pursuant to 52 Pa. Code §5.14, you are required to serve a copy of the signed and verified Application, with attachments, on the below-listed parties, and file proof of such service with this Commission:

Office of Consumer Advocate
555 Walnut Street
5th Floor, Forum Place
Harrisburg, PA 17101-1923

Office of Small Business Advocate
Commerce Building, Suite 1102
300 North Second Street
Harrisburg, PA 17101

Office of Attorney General
Office of Consumer Protection
Strawberry Square
Harrisburg, PA 17120

A certificate of service must be attached to the Application as proof of service that the Application has been served on the above-listed parties. A copy of any Competitive Local Exchange Carrier Application must also be served on any and/or all Incumbent Local Exchange Carrier(s) in the geographical area where the Applicant proposes to offer services.

18. **FEDERAL TELECOMMUNICATIONS ACT OF 1996:** State whether the Applicant claims a particular status pursuant to the Federal Telecommunications Act of 1996. Provide supporting facts.

Level 3 does not claim a particular status pursuant to the Federal Telecommunications Act of 1996.

19. **COMPLIANCE:** State specifically whether the Applicant, an affiliate, a predecessor of either, or a person identified in this Application has been convicted of a crime involving fraud or similar activity. Identify all proceedings, limited to proceedings dealing with business operations in the last five (5) years, whether before an administrative body or in a judicial forum, in which the Applicant, an affiliate, a predecessor of either, or a person identified herein has been a defendant or a respondent. Provide a statement as to the resolution or present status of any such proceedings.

Neither Level 3, an affiliate, predecessors, nor any person Identified in this Application has been convicted of a crime involving fraud or similar activity.

20. **FALSIFICATION:** The Applicant understands that the making of false statement(s) herein may be grounds for denying the Application or, if later discovered, for revoking any authority granted pursuant to the Application. This Application is subject to 18 Pa. C.S. §§4903 and 4904, relating to perjury and falsification in official matters.

21. **CESSATION:** The Applicant understands that if it plans to cease doing business within the Commonwealth of Pennsylvania, it is under a duty to request authority from the Commission for permission prior to ceasing business.

Applicant:
Level 3 Communications

By: Carolyn Ridley
Carolyn Ridley
Title: Senior Director State Public Policy

22. **AFFIDAVIT*:*** Attach to the Application an affidavit as follows:

AFFIDAVIT

Commonwealth of Kentucky:

: ss.

County of Warren:

Carolyn M. Ridley, Affiant, being duly [sworn/affirmed] according to law, deposes and says that:

Affiant is the Senior Director of State Public Policy (Office of Affiant) of Level 3 Communications, LLC (Name of Applicant;).

That Affiant is authorized to and does make this affidavit for said corporation;

That Level 3 Communications, LLC, the Applicant herein, acknowledges that [he/she/it] may have an obligation to serve or to continue to serve the public by virtue of the Applicant commencing the rendering of service pursuant to this Application consistent with the Public Utility Code of the Commonwealth of Pennsylvania, Title 66 of the Pennsylvania Consolidated Statutes; with the Federal Telecommunications Act of 1996, signed February 6, 1996, or with other applicable statutes or regulations;

That Level 3 Communications, LLC, the Applicant herein, asserts that Affiant] possesses the requisite technical, managerial, and financial fitness to render public utility service within the Commonwealth of Pennsylvania and that the Applicant will abide by all applicable federal and state laws and regulations and by the decisions of the Pennsylvania Public Utility Commission.

That Level 3 Communications, LLC, the Applicant herein, asserts that Affiant has contacted the appropriate 911 Coordinator(s) for the Mahanoy & Mahantongo Telephone Company serving area via certified letter, from the list provided from the PUC website (http://www.puc.state.pa.us), and that arrangements are under way for the provisioning of emergency 911 service for the additional Counties/Cities where service is to be provided. The applicant certifies Affiant has attached a copy of the 911 Coordinator list indicating each 911 Coordinator contacted for this requested expansion (See Attachment 7).

That the facts above set forth are true and correct] to the best of Affiant knowledge, information and belief, and that Affiant expects said entity to be able to prove the same at any hearing thereof.

Carolyn Ridley
Signature of Affiant

Sworn and subscribed before me this 18th day of May, 2017.

Kim Witherspoon
Signature of official administering oath

My Commission expires 8-12-2018.

23. §1.36 Verification.

Verification

I, Carolyn M. Ridley, hereby state that the facts above set forth are true and correct (or are true and correct to the best of my knowledge, information and belief), and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

5/17/2017 — *Date*

Carolyn M Ridley — *Signature*

Index of Attachments

1 – Formation Documents

2 – Officer Biographies

3 – SEC 10-K Report

4 – Proposed Tariffs

5 – Earnings Report 1Q17

6 – Rating Agency Reports

7 – 911 Coordinator List

8 – Affiliates List

Attachment 1

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF STATE

APRIL 20, 2015

TO ALL WHOM THESE PRESENTS SHALL COME, GREETING:

I DO HEREBY CERTIFY THAT,

LEVEL 3 COMMUNICATIONS, LLC

is duly registered as a Foreign Limited Liability Company under the laws of the Commonwealth of Pennsylvania and remains subsisting so far as the records of this office show, as of the date herein.

I DO FURTHER CERTIFY THAT, This Subsistence Certificate shall not imply that all fees, taxes, and penalties owed to the Commonwealth of Pennsylvania are paid.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Seal of the Secretary's Office to be affixed, the day and year above written.

Pedro A. Cortés

Acting Secretary of the Commonwealth

Certification Number: 12578950-1
Verify this certificate online at http://www.corporations.state.pa.us/corp/soskb/verify.asp

CERTIFICATE OF FORMATION
OF
LEVEL 3 COMMUNICATIONS, LLC

I
NAME

The name of the company shall be Level 3 Communications, LLC ("Company").

II
REGISTERED AGENT AND OFFICE

The name and address of the Company's registered agent in Delaware is:

The Corporation Trust Company
Corporation Trust Center
1209 Orange Street
Wilmington, DE 19801 (New Castle County)

IN WITNESS WHEREOF, the undersigned authorized person has caused this Certificate of Formation to be executed this 26th day of November, 1997.

PKS INFORMATION SERVICES, INC.

By: ____________________
Title: Director

138230.02

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 11:00 AM 12/01/1997
971407141 - 2827172

CERTIFICATE OF AMENDMENT TO THE CERTIFICATE OF FORMATION OF LEVEL 3 COMMUNICATIONS, LLC

Pursuant to Section 18-202 of the Delaware Limited Liability Company Act, Level 3 Communications, LLC, a Delaware limited liability company ("Company"), hereby certifies as follows:

The name of the Company is Level 3 Communications, LLC. The original Certificate of Formation of the Company was filed with the Delaware Secretary of State on December 1, 1997. The sole member of the Company has authorized and adopted the following amendment to the Company's Certificate of Formation:

Article I is hereby deleted in its entirety and replaced with a new Article I as follows:

I

The name of the company shall be Level Three Communications, LLC ("Company").

IN WITNESS WHEREOF, the manager of the Company has caused this Certificate of Amendment to be executed in accordance with the Delaware Limited Liability Company Act.

Dated as of this 13th day of January, 1998.

LEVEL 3 COMMUNICATIONS, LLC

By: Terrence J. Ferguson
Terrence J. Ferguson, Manager

STATE OF NEBRASKA)
) ss.
COUNTY OF DOUGLAS)

The foregoing instrument was acknowledged before me this 13 day of January, 1998, by Terrence J. Ferguson, a Manager of Level 3 Communications, LLC, a Delaware limited liability company, on behalf of the company.

Diane L. Chaffee

GENERAL NOTARY-State of Nebraska
DIANE L. CHAFFEE
My Comm. Exp. March 11, 2000

146133

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 10:00 AM 01/14/1998
981015573 - 2827172

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 03:25 PM 01/16/1998
981020465 - 2827172

CERTIFICATE OF AMENDMENT
TO THE
CERTIFICATE OF FORMATION
OF
LEVEL THREE COMMUNICATIONS, LLC

Pursuant to Section 18-202 of the Delaware Limited Liability Company Act, Level Three Communications, LLC, a Delaware limited liability company ("Company"), hereby certifies as follows:

The name of the Company is Level Three Communications, LLC. The original Certificate of Formation of the Company was filed with the Delaware Secretary of State on December 1, 1997. A Certificate of Amendment to the Certificate of Formation of the Company was filed with the Delaware Secretary of State on January 14, 1998. The sole member of the Company has authorized and adopted the following amendment to the Company's Certificate of Formation:

Article I is hereby deleted in its entirety and replaced with a new Article I as follows:

I

The name of the company shall be Level 3 Communications, LLC ("Company").

IN WITNESS WHEREOF, the manager of the Company has caused this Certificate of Amendment to be executed in accordance with the Delaware Limited Liability Company Act.

Dated as of this 16th day of January, 1998.

LEVEL THREE COMMUNICATIONS, LLC

By: Terrence J. Ferguson
Terrence J. Ferguson, Manager

STATE OF NEBRASKA)
) ss.
COUNTY OF DOUGLAS)

The foregoing instrument was acknowledged before me this 16th day of January, 1998, by Terrence J. Ferguson, a Manager of Level Three Communications, LLC, a Delaware limited liability company, on behalf of the company.

GENERAL NOTARY-State of Nebraska
DIANE L. CHAFFEE
My Comm. Exp. March 11, 2000

Diane L. Chaffee

146133

Attachment 2

Biographies of Level 3 Communications' Management Team

Jeff Storey - President and Chief Executive Officer

Jeff Storey is president and chief executive officer of Level 3 Communications, a global telecommunications company with a comprehensive portfolio of data, security, video, voice and unified communications solutions. Mr. Storey was named to his current position in April 2013 and also is a member of the company's Board of Directors.

As CEO of Level 3, Mr. Storey positioned the company to capitalize on the industry transition from legacy services to more efficient and secure technologies. Level 3's global network is foundational to providing these enhanced network capabilities. He also prioritized a company-wide focus on the customer experience enabling his team to respond more effectively to the complex demands of the market.

Before assuming his current role, Mr. Storey served as the company's president and chief operating officer, with global responsibility for Level 3's sales, marketing, customer and network operations, IT and business process engineering spanning three regions: North America, Latin America and EMEA.

Mr. Storey has held a number of leadership positions in the telecommunications industry. He served as president and CEO of WilTel Communications and was president of Leucadia Telecommunications Group. He also held senior executive positions at Cox Communications, where he was a founding member of Cox Business Services. He began his 30-year career in the telecommunications industry with Southwestern Bell Telephone.

Hector Alonso - Regional President, Latin America

Hector Alonso is regional president of Latin American markets for Level 3 Communications, responsible for overall business goals for Latin America, including sales, marketing and operations in region.

Previously, Mr. Alonso was managing director of Global Crossing's Latin American region. Prior to that, he was Impsat Fiber Networks' chief financial officer before their acquisition by Global Crossing in May 2007. Before becoming chief financial officer, Mr. Alonso served as chief operating officer for Impsat in Latin America and the United States and as president of its Colombian operations. He also was managing director of Lime S.A., a waste management company in Colombia, and held other key positions in the Pescarmona group of companies.

John Blount - Regional President, North America and Asia Pacific

John Blount is regional president, North America and APAC, with responsibility for driving business growth and streamlining operations across both regions.

Prior to his role at Level 3, Mr. Blount was president and chief operating officer for tw telecom where he was instrumental in the company's growth and market expansion throughout the United States. John worked for tw telecom for 18 years and during his tenure was been recognized for his leadership in product innovation and creating an excellent customer experience. He held various positions, including president and chief operating officer and executive vice president of field operations with responsibility for significant enterprise growth and implementations of tw telecom's Internet strategy and data product portfolio.

Sunit Patel - Executive Vice President and Chief Financial Officer

Sunit Patel is executive vice president and chief financial officer for Level 3 Communications, with responsibility globally for financial planning, accounting, tax, auditing, treasury, shared services, procurement and supply chain management.

He joined the company in 2003 and was named CFO in May of that year.

Mr. Patel was formerly CFO and a co-founder of Looking Glass Networks Inc., a facilities-based provider of metropolitan telecommunication transport services. Prior to co-founding Looking Glass, Mr. Patel was treasurer of MCI WorldCom. Prior to that, he was treasurer of MFS Communications, Inc., a competitive local exchange carrier acquired by WorldCom. Mr. Patel was also responsible for corporate development and strategic planning for BJ Services Company (NYSE: BJS) and has worked in investment banking.

Anthony Christie - Chief Marketing Officer

Anthony Christie is chief marketing officer for Level 3 Communications, responsible for worldwide marketing, product management and customer experience.

Previously, Mr. Christie was chief technology and information officer for Global Crossing, where he was responsible for global technology, operations, IT strategy, customer experience and business process. Prior to that, Mr. Christie was managing director of Global Crossing for Europe, the Middle East and Africa, based in the United Kingdom. He also served as Global Crossing's chief marketing officer.

Prior to joining Global Crossing, Mr. Christie was VP of business development and strategic planning for Asia Global Crossing in Hong Kong. Mr. Christie also held key positions with AT&T Solutions and with AT&T's Asia Pacific International Operations Division in Seoul Korea and Hong Kong.

Gary Breauninger - Group Vice President, Global Accounts Management (GAM) Division

Gary Breauninger is Group Vice President, Global Accounts Management Division for Level 3 Communications. In this role, Mr. Breauninger is responsible for oversight of all global marketing, pricing, sales, sales support and customer service functions for Level 3's largest customers including Fortune 500 enterprises and wholesale carriers. Mr. Breauninger joined Level 3 in 2011.
Over the course of his career, Mr. Breauninger has held a variety of positions in the telecommunications sector including senior leadership roles at Global Crossing and AT&T.

Matthew Gutierrez - Interim Regional President, EMEA

Matthew Gutierrez is the Interim Regional President, EMEA for Level 3 Communications. He is responsible for overall business results of the region including sales, marketing and operations.
Mr. Gutierrez joined Level 3 in 2000 and has held a variety of senior leadership positions. Most recently, he served as the Chief Financial Officer, EMEA.
Prior to joining Level 3, Mr. Gutierrez held management positions with Global Crossing and AT&T.

Laurinda Pang - Executive Vice President and Chief Administrative Officer

Laurinda Pang is executive vice president and chief administrative officer for Level 3 Communications, with global responsibility for human resources, corporate strategy, corporate development, corporate communications, investor relations and corporate social responsibility. She is also executive sponsor of the company's global diversity and inclusion initiatives.

Before assuming her current role, Ms. Pang was the chief human resources officer for Level 3. She has nearly 20 years of experience in the telecommunications industry. Prior to joining Level 3, she was senior vice president of human resources at Global Crossing. She also served as vice president of Global Crossing customer experience re-engineering, responsible for all aspects of global business transformation affecting customer experience. Before that, Ms. Pang held a number of key roles at Global Crossing, including vice president of investor relations, chief of staff to the CEO and vice president of operations and was a member of the executive team that restructured the company during a critical phase in its history.

John Ryan - Executive Vice President, Chief Legal Officer and Secretary

John Ryan is the executive vice president and chief legal officer for Level 3 Communications and secretary for the company. He is responsible for managing Level 3's legal, regulatory and compliance functions globally. He also directs Level 3's government relations function, including public policy strategy.

Mr. Ryan has worked in roles supporting Level 3's customer contracting and vendor contracting since 1999 and led Level 3's public policy group from 2005 until 2010. Prior to his tenure at Level 3, Mr. Ryan was an associate and partner at the Fraser Stryker law firm in Omaha, Nebraska, where his practice focused on the communications industry. Mr. Ryan represented Level 3, MFS Communications, NorthPoint Communications and MCI during his years in private practice.

Atilla Tinic - Chief Information Officer

Atilla Tinic is chief information officer for Level 3 Communications, responsible for the global IT organization and, in collaboration with marketing, innovating services for our customers.

Mr. Tinic joined Level 3 in 2014 as part of the tw telecom acquisition and had been with the company since 2004, where he served as senior vice president of IT. He has more than 20 years of experience in IT architecture, system engineering and data management.

Prior to joining Level 3, Mr. Tinic held leadership positions with Bell Canada, Bell Sygma, Saville Systems and American Management Systems (AMS). Mr. Tinic holds a B.A. degree in Economics and Psychology from the University of Western Ontario and an M.A.S. degree from the University of Denver.

Andrew Dugan - Chief Technology Officer

Andrew Dugan is chief technology officer for Level 3 Communications, responsible for global network technology, architecture, engineering, systems and security. n

Mr. Dugan joined Level 3 in 1998. He has 30 years of experience in building telecommunications networks, switching platforms and services platforms. Prior to joining Level 3, Mr. Dugan held leadership positions at MCIWorldcom and AT&T Bell Laboratories where he designed and built transport network support systems, enhanced voice services platforms and architecting next generation voice switching networks.

Mr. Dugan holds a B.S. degree in Computer Science and Electrical Engineering from the University of Colorado as well as an M.S. Degree in Computer Engineering from the University of Michigan.

Attachment 3

Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2016

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period to

Commission file number 001-35134

LEVEL 3 COMMUNICATIONS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**47-0210602**
(State of Incorporation)	(I.R.S. Employer Identification No.)
1025 Eldorado Blvd., Broomfield, CO	**80021-8869**
(Address of principal executive offices)	(Zip Code)

(720) 888-1000
(Registrant's telephone number,
including area code)

Securities registered pursuant to section 12(b) of the Act:

Common Stock, par value $.01 per share	**New York Stock Exchange**

Securities registered pursuant to section 12(g) of the Act
None

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark whether the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

As of June 30, 2016 , the aggregate market value of common stock held by non-affiliates of the registrant approximated $15.008 billion based upon the closing price of the common stock as reported on the New York Stock Exchange as of the close of business on that date. Shares of common stock held by each executive officer and director and by each entity that owns 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Title	Outstanding
Common Stock, par value $.01 per share	360,678,324 as of February 22, 2017

DOCUMENTS INCORPORATED BY REFERENCE

List hereunder the following documents if incorporated by reference and the Part of the Form 10-K (e.g., Part I, Part II, etc.) into which the document is incorporated: (1) Any annual report to security holders; (2) Any proxy or information statement; and (3) Any prospectus filed pursuant to Rule 424(b) and (c) under the Securities Act of 1933. The listed documents should be clearly described for identification purposes (e.g., annual report to security holders for fiscal year ended December 24, 1980.)

Portions of Our Definitive Proxy Statement for the 2017 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Table of Contents

Unless the context otherwise requires or expressly stated herein, when we use the words "Level 3," "we," "us," or "our company" in this annual report on Form 10-K, we are referring to Level 3 Communications, Inc., a Delaware corporation, and its subsidiaries. Throughout this Form 10-K, we use various industry terms and abbreviations, which we have defined in the Glossary of Terms at the end of Item 1, "Business." The Level 3 logo and Level 3 are registered service marks of our wholly owned subsidiary , Level 3 Communications, LLC, in the United States and other countries. All rights are reserved. This Form 10-K refers to trade names and trademarks of other companies. The mention of these trade names and trademarks in this Form 10-K is made with due recognition of the rights of these companies and without any intent to misappropriate those names or marks. All other trade names and trademarks appearing in this Form 10-K are the property of their respective owners.

Cautionary Factors That May Affect Future Results
(Cautionary Statements Under the Private Securities Litigation Reform Act of 1995)

This Form 10-K contains statements and information that are based on the beliefs of our management as well as assumptions made by and information currently available to us. When we use words like "plan", "estimate," "expect," "anticipate," "believe," "intend," "goal," "seek," "project," "strategy," "future," "likely," "may," "should," "will" and similar expressions with respect to future periods in this Form 10-K, as they relate to us or our management, we are intending to identify forward-looking statements. These statements reflect our current views with respect to future events and are subject to certain risks, uncertainties and assumptions.

Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, our actual results may vary materially from those described in this document.

These statements regarding our pending acquisition by CenturyLink, Inc. include, among others, statements concerning:

- the ability of the parties to timely and successfully receive the required approvals for the combination from regulatory agencies free of conditions materially adverse to the parties and from their respective shareholders; and

- the possibility that the anticipated benefits from the proposed transaction cannot be fully realized or may take longer to realize than expected

These statements regarding our business include, among others, statements concerning:

- expectations as to our future revenue, margins, expenses, cash flows, profitability and capital requirements;

- our communications business, its advantages and our strategy for continuing to pursue our business;

- anticipated development and launch of new services in our business;

- anticipated dates on which we will begin providing certain services or reach specific milestones;

- growth of the communications industry;

- our integration of the operations of companies that we acquire and the anticipated benefits and synergies in connection with that acquisition; and

- other statements of expectations, beliefs, future plans and strategies, anticipated developments and other matters that are not historical facts.

These statements are subject to risks and uncertainties, including financial, regulatory, environmental, industry growth and trend projections, that could cause actual events or results to differ materially from those expressed or implied by the statements. The most important factors that could prevent us from achieving our stated goals include, but are not limited to, the effects on our business and our customers of general economic and financial market conditions as well as our failure to:

- increase revenue and free cash flow from the services we offer;
- successfully use new technology and information systems to support new and existing services;
- prevent process and system failures that significantly disrupt the availability and quality of the services that we provide;
- prevent our security measures from being breached, or our services from being degraded as a result of security breaches;
- develop new services that meet customer demands and generate acceptable margins;
- effectively manage expansions to our operations;
- provide services that do not infringe the intellectual property and proprietary rights of others;
- attract and retain qualified management and other personnel; and
- meet all of the terms and conditions of our debt obligations.

Except as required by applicable law and regulations, we undertake no obligation to publicly update any statements, whether as a result of new information, future events or otherwise. Further disclosures that we make on related subjects in our additional filings with the Securities and Exchange Commission, or the SEC, should be consulted. For further information regarding the risks and uncertainties that may affect our future results, please review the information set forth below under Item 1A, “Risk Factors.”

Part I

ITEM 1. BUSINESS

Introduction

We are an international facilities-based provider of a broad range of integrated communications services. A facilities-based provider is a provider that owns or leases a substantial portion of the plant, property and equipment necessary to provide its services. We have created our international communications network by constructing our own assets and through a combination of purchasing other companies and purchasing or leasing facilities from others. We designed our network to provide communications services that employ and take advantage of rapidly improving underlying optical, Internet Protocol, computing and storage technologies.

On October 31, 2016, we and CenturyLink, Inc., a Louisiana corporation (“CenturyLink”), entered into a Merger Agreement pursuant to which Wildcat Merger Sub 1 LLC, a wholly owned subsidiary of CenturyLink, will merge with and into Level 3 (the “Initial Merger”) with Level 3 continuing as the surviving corporation and, immediately following the Initial Merger, the surviving corporation will merge with and into WWG Merger Sub LLC, another wholly owned subsidiary of CenturyLink, with WWG Merger Sub LLC continuing as the surviving company (together with the Initial Merger, the “CenturyLink Acquisition”). The combined company will have the ability to offer CenturyLink’s larger enterprise customer base the benefits of our global footprint with a combined presence in more than 60 countries. In addition, the combined company will be positioned to further enhance the scope and transmission speeds of its broadband infrastructure.

If the CenturyLink Acquisition is completed, our stockholders will have the right to receive $26.50 in cash and 1.4286 shares of CenturyLink common stock for each share of Level 3 common stock they own at the effective time of the Initial Merger (the “exchange ratio”), with cash paid in lieu of fractional shares. The exchange ratio is fixed and will not be adjusted to reflect stock price changes prior to the closing of the combination. Based on the closing price of CenturyLink common stock on the New York Stock Exchange of $28.25 on October 26, 2016, the last trading day before public reports of a possible transaction, the merger consideration represented approximately $66.86 of aggregate value for each share of Level 3 common stock.

The descriptions of our business in this Form 10-K do not assume that the CenturyLink Acquisition has been completed. However we do describe certain risk factors associated with the pending transaction below under Item 1A, “Risk Factors.”

Our company was incorporated as Peter Kiewit Sons’, Inc. in Delaware in 1941 to continue a construction business founded in Omaha, Nebraska in 1884. In subsequent years, we invested a portion of the cash flow generated by our construction activities in a variety of other businesses, including, among other things, the communications business. In 1998, our historical construction business was split off from the remainder of our operations. In conjunction with the split-off, we changed our name to “Level 3 Communications, Inc.,” and the entity that was split-off and held the prior construction business was named “Peter Kiewit Sons’, Inc.”

We sold various businesses subsequent to the split-off, including our coal mining business in November 2011, as part of our long-term strategy to focus on core communications business operations. Most recently, in October 2011, we acquired Global Crossing Limited and in October 2014 we acquired tw telecom inc. The results of operations of the companies that we have acquired have been included in our consolidated results of operations since the respective closing date of the acquisition.

As of December 31, 2016 , we had approximately 12,600 total employees. We believe that our success depends in large part on our ability to attract and retain qualified employees.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. These filings are available to the public on the Internet at the SEC’s website at *www.sec.gov* . You may also read and copy any document we file with the SEC at the SEC’s public reference room, located at 100 F Street, N.E. Room 1580, Washington, D.C. 20549. Our Form 10-K and all other reports and amendments filed with or furnished to the SEC are publicly available free of charge on the investor relations section of our website as soon as reasonably practicable after we file such materials with, or furnish them to, the SEC. Our website is *www.level3.com* . We caution you that the information on our website is not part of this or any other report we file with, or furnish to, the SEC.

Business Overview, Vision and Strategy

Level 3's vision is to be the trusted connection to the networked world. We seek to achieve this vision by focusing on:

- maximizing the value of our network for our customers by expanding the breadth and depth of our local to global network, and connecting our customers to their digital ecosystem of data and applications, which we refer to as "digital transformation;"
- delivering an exceptional and consistent customer experience by innovating to improve the efficiency and scalability of our operating platform; and
- generating profitable growth by expanding our enterprise customer base and layering value-added services onto existing network and operational capabilities.

We strive to create a culture and business environment that makes it easy for customers to do business with us, and providing high-performing, reliable and secure services on our local-to-global network with superior price value. We focus on operational excellence to streamline our systems and business processes to deliver a superior customer experience, and to reduce overhead costs and transactional costs for ourselves and for our customers.

We believe that we can be successful by making our customers the focal point of all we do. Our value proposition is structured to be fully aligned with helping our customers meet their growth, efficiency and security business challenges both today and in the future and across the globe wherever our services are available.

We believe that advances in optical and Internet Protocol, or IP, technologies have facilitated, and will continue to facilitate, decreases in unit costs for communications service providers that are able to most effectively take advantage of these technology advances. We believe that, over time, rapidly improving technologies and high demand elasticity will continue to drive this market dynamic.

Enterprises are increasingly moving their content and applications to third party providers of on-demand server and storage resources to reduce the costs and complexity of their information technology, or IT, operations. Since these server and storage resources can be offsite in any location and are often virtualized (as opposed to residing on dedicated hardware in a known location) they are referred to as "Cloud Services." We believe that this migration of enterprise data and applications to the Cloud will drive increased demand for our high-performing, reliable and secure network services .

Today's market drivers can be broken into three categories as they pertain to our core business strategy:

- *Growth.* We expect digital data creation and the associated demand for bandwidth to keep growing, as business relationships and supply chains become increasingly digital, and end users increasingly expect to be able to access their data and applications anytime and anywhere. Cloud application adoption continues to grow for all businesses, especially our enterprise customers. Mobility and Internet connected device proliferation continue to increase the rate at which content - especially video - is consumed, which in turn results in increased demand for higher bandwidth to enable that delivery and consumption. A rapidly increasing number of smart homes, cars, and everyday objects are getting connected to the network (the "Internet of Things"), further increasing demand for scalable and secure bandwidth. Globalization trends continue as customers look for growth from emerging markets, particularly with respect to enterprise customers. Additional opportunities for growth are present as a result of changing regulatory requirements in industries such as healthcare, consumer privacy, and financial services.

- *Efficiency* . As traffic volumes grow, our customers are not only under pressure to keep up with this growth but also to do so more efficiently. Accordingly, our product and technology teams take advantage of the scale and capabilities of our network and continuously innovate to deliver cost-effective services that meet customer needs.

- *Security* . Cyber threats continue to escalate, which affects both us and our customers. As more enterprise customer data and applications move to the Cloud, and as more and more consumer devices and personal information become reachable through the Internet, maintaining a secure network and collection of systems and processes is more important than ever.

Technology innovation in Internet Protocol and optical networking technologies has resulted in improvement in the functionality of applications supported by these technologies. We believe that this rapid innovation will continue well into the future across a number of different aspects of the communications marketplace.

We believe that decreases in communications services costs and prices enable the development of new bandwidth intensive applications, which, over time, result in even more significant increases in bandwidth demand. In addition, we believe that communications services are direct substitutes for other existing modes of information distribution from sources such as traditional broadcast entertainment as well as distribution of software, audio and video content using physical media delivered through physical transportation systems. An example of this dynamic is the use of the Internet for the distribution of video. We believe that as communications services improve more rapidly than traditional content distribution systems, demand for Internet delivered video will continue to grow rapidly. We also believe that high elasticity of demand for both new applications and the substitution for existing distribution systems will continue for the foreseeable future.

We also believe that there are significant implications that result from these market dynamics. First, given the improvement in optical and Internet Protocol technologies, communications service providers that are most effective at rapidly deploying new services that take advantage of these technologies will have an inherent cost and service advantage over companies that are less effective at deploying new services that use these technologies. In addition, given the consolidation in the number of local access providers (that is, the providers of connections from intercity networks to traffic aggregation points or end user locations), communications service providers that have ownership of local and/or metropolitan network facilities will have an inherent cost and service advantage over companies that do not have ownership over these types of assets. With respect to the migration to Cloud Services, this market dynamic creates opportunities for us to provide secure and high performance network connections to our enterprise customers, enabling their employees to connect seamlessly and efficiently to their content and applications in the Cloud.

In view of these market and technology opportunities, we seek to serve business customers by using a customer - first focus and providing a broad range of communications services over our advanced and extensive fiber optic network. With our network’s extensive geographic reach and deep reach into major metropolitan areas of the United States, Europe and Latin America, we are positioned to provide end-to-end services for business customers entirely on our own facilities across multiple continents.

We have and will continually expand our fiber optic network to new locations where the demands of our customers and potential customers justify the upfront costs of expansion. This allows us to provide an end-to-end connection for the customer across our own fiber optic network, which is more secure and efficient and allows us to deliver a superior customer experience. Today and for the foreseeable future, we will need to connect to some locations using the networks of other carriers. We manage these relationships with other carriers to make the interconnection as efficient and effective as possible. We seek to minimize the need for these “off network” connections by targeting customers whose needs can be met primarily over our network and by building our network to as many high-traffic locations as possible.

Our fiber optic network has extensive reach across North America, Europe and Latin America. Our network reaches not only hundreds of cities (we refer to the part of our network connecting the larger cities as our “intercity” network) but also includes fiber optic routes around the various parts of the larger metropolitan areas (we refer to this part of our network as our “metropolitan” or “metro” networks), which allows us to connect directly with wholesale customers in major traffic aggregation centers (such as central offices of local exchange carriers) and with many medium and large enterprise customers at their offices and data centers. In addition, the fact that our metro networks have significant reach throughout major metropolitan areas means that we can make relatively short network extensions to reach customer locations that our network does not currently reach.

To connect our networks in North America, Europe and Latin America, as well as to connect our network to cities in other parts of the world, we own several undersea cables and have purchased capacity on cables owned by others. Since subsea cables require very large upfront investment and have very large capacity compared to the needs of any one carrier, they typically are either owned by consortia of carriers or are financed significantly by selling a large amount of capacity to other carriers either before the cable is built or shortly thereafter. We historically have been active both in building undersea cables and in buying capacity from others. Today we own more than 37,500 route miles of undersea fiber optic cables around the world. In addition, as we have points of presence (PoPs) in Asia, Africa and Australia, we have also purchased capacity on others’ undersea cables to allow us to offer services in those regions despite the fact that we do not have extensive fiber optic networks of our own in these regions. This is important to our ability to handle the global needs of our multinational customers. For more information about our network, see Item 1, “Business - Our Communication Network” below.

For larger customers, specialized real estate is often required to house the equipment that we and the customer use to exchange traffic. This space requires a concentrated amount of electric power and cooling, as well as server racks, fiber optic cables and other technical equipment. Such specialized real estate, depending upon its nature and the type of companies that use it, is referred to variously as “colocation” or “data center” space. For interconnection among wholesale carriers and some of the largest enterprise customers, we also use real estate owned by third parties. We own or lease more than 250 colocation facilities in North America, approximately 100 colocation facilities in Europe, and approximately 15 colocation facilities in Latin America. In addition, we operate approximately 20 data center facilities in Latin America, Europe and North America.

Our business includes voice services. Historically, end-user voice services were provided over a network of local exchange carriers whose copper wire networks were dedicated to that service. Today, voice services can be carried over the Internet as a data service. This type of voice service usually is referred to as “voice over Internet Protocol,” or “VoIP”. Since many calls include a connection to the traditional voice network on one end and a VoIP connection on the other, early in our existence we became deeply involved in managing connections between VoIP customers and those on the traditional public switched telephone network. This involves not only developing and managing equipment and software specialized for that purpose but also developing physical connections of our Internet Protocol network with the traditional networks of the various local exchange carriers. Additionally, we have also physically interconnected our IP network with the networks of many cellular telephone carriers. This enables us to provide what we believe is a more comprehensive service than most other carriers can provide to handle customers’ needs for voice connections in today’s changing communications environment. Our services that manage the initiation or termination of customers’ voice calls generally are referred to as “local voice” services. Our voice services also include our comprehensive suite of audio, web and video collaboration services.

We also provide services that handle the termination of large volumes of telephone calls on behalf of other carriers. We refer to these as “wholesale voice” services. These services are provided in a very competitive environment in which many carriers participate and the customer typically uses automated systems to choose the least expensive way to terminate traffic to each city around the world on a minute-by-minute basis.

We provide specialized communications services for companies that distribute video or other digitized content across the Internet. Because the amount of bandwidth required by such media is large, special services are used to ensure delivery of such content at desired levels of quality. We have developed a system of servers, with software to control them, that store more popular content in various locations around the world. The aim is to store content so that it is not transferred very far across the Internet. This type of service typically is referred to as a “Content Delivery Network,” or “CDN.” We also have specialized video services to handle the needs of broadcasters for the rapid transmission of the very large streams of information that emerge when live events are broadcast. We carry these video streams across our network to locations specified by the broadcasters and from which these customers broadcast their final edited content.

Managing the transmission of information across our network requires the proper management of many interconnected technologies, processes and systems to provide high quality, convenient secure and reliable services for our customers. Some of these services may be charged for separately, while others are included as an integral part of our more basic services. Examples of services that are typically charged separately include network security (i.e., helping customers keep their information safe) and network monitoring (i.e., keeping customers informed of the status of various equipment and sub-parts of their connections). We regularly develop new features and ancillary services to keep our network services as valuable as possible to our target customers.

Since a large portion of our communications services are purchased by companies to interconnect their own information technology applications, often we find that certain customers need ancillary services that are not clearly part of communications network services and may more properly be described as information technology services. In an effort to ensure that our customers receive a superior overall experience, we frequently enter into partnerships with providers that specialize in these information technology services, so that we can assemble the full collection of services for the customer. In making the decision to add such services, we consider several factors including our core strengths, the existence of other parties with whom we can work to satisfy the customers’ needs, how important it is to customers that the new service be combined into a single Level 3 offering, and the size of the incremental market that would become addressable by offering such services. For more information about our service offerings, see Item 1, “Business - Our Service Offerings” below.

We are currently focusing our attention on a number of operational and financial objectives, including:

- driving profitable revenue growth by increasing sales generated by our Core Network Services;
- growing our Enterprise customer base as well as our share of their telecom spend, as this customer group has the largest potential for significant growth;
- continually improving the customer experience to increase customer retention and reduce customer churn;
- launching new products and services to meet customer needs, in particular for Enterprise customers;
- reducing network costs and operating expenses relative to our revenue;
- growing positive cash flows from operations;

- continuing to show improvement in Adjusted EBITDA (as defined in Item 7, “Management’s Discussions and Analysis of Financial Condition and Results of Operation”) as a percentage of revenue;
- concentrating our capital expenditures on those technologies and assets that enable us to increase our Core Network Services revenue;
- integrating our prior acquisitions, building on the strengths and capabilities of the acquired legacy companies to position the combined company as a premier global communications provider; and
- managing our Wholesale Voice Services for margin contribution.

For a discussion of our Core Network Services and Wholesale Voice Services, see Item 1, “Business-Our Service Offerings” below.

Our Strengths

We believe that the following strengths will assist us in implementing our strategy:

- *Experienced Management Team* . We have assembled a management team that we believe is well suited for our business objectives and strategy. Our senior management has substantial experience in leading the development, marketing and sale of communications services and in managing, designing and constructing metropolitan, intercity and international networks.
- *Recognized Industry Leadership* . We have a proven track record among communication service providers for being the first to implement many new technologies, including: global MPLS network in 2001, first global provider with IPV6 natively deployed, first to introduce VoIP and MPLS, and the first converged IP solution.
- *Global Reach of Our Network* . We deliver services to more than 60 countries around the world on our global network. Our network connects and crosses North America, Latin America, Europe and a portion of the Asia/Pacific region.
- *A Broad Range of Communications Services* . We provide a broad range of communications services designed to meet the needs of our customers over our network. Our communications service offerings include:
  - Internet and data services, which includes Internet access and IP and Ethernet Virtual Private Networks, content distribution services including caching and downloading, streaming as well as video broadcast services;
  - Transport and fiber services, which includes services such as wavelengths and private line services (transoceanic, backhaul, intercity, metro and unprotected private line services) as well as dark fiber in both our intercity and metropolitan networks;
  - Voice and collaboration services, which includes enterprise or business voice services, wholesale VoIP component services, wholesale voice origination and termination services, voice, web and video conferencing and collaboration services; and
  - Colocation and data center services, which offer high quality data center space where customers can locate servers, content storage devices and communications network equipment in a safe and secure technical operating environment along with value-added

services such as Managed Network Services and Managed Security, including protection against Distributed Denial of Service (DDoS) attacks.

The availability of these services varies by location.
For several years we have been developing services that take advantage of the investment that we have made in our network and that generally target large, existing markets. We have also expanded our existing markets for communications services through the acquisitions that we have completed, which has significantly increased the global reach of our network. Through our efforts we have increased significantly our addressable market by adding new addressable customers as well as new voice and data services that take advantage of the geographic coverage and cost advantages of our network.

- *Significant Metropolitan Network Platform.* As of December 31, 2016 , we have metropolitan fiber networks in approximately 350 markets in North America, Europe and Latin America, which currently contain approximately 69,000 route miles. The number of route miles may change in the future as we continue to optimize our network routes. Our metropolitan networks enable us to connect directly to points of traffic aggregation and customer locations and reduce our costs for the termination of our customers’ communications traffic on other carriers’ networks.

- *End-to-End Network Platform* . Our strategy is to deploy network infrastructure in major metropolitan areas and to link these networks with significant intercity and trans-oceanic networks in North America, Europe and Latin America. We believe that the integration of our metropolitan and intercity networks with our colocation facilities will expand the scope and reach of our on-net customer coverage, facilitate the uniform deployment of technological innovations as we manage our future upgrade paths and allow us to grow or scale our service offerings rapidly. We believe that we have a unique combination of:

  - a substantial intercity and subsea network;
  - large fiber count metropolitan networks;
  - global network reach;
  - substantial colocation & data center facilities;
  - innovative content distribution technology and services; and
  - a growing set of security services.

- *Advanced IP Backbone.* We operate one of the largest international IP networks or backbones. Our IP services deliver a broad range of IP transit and network interconnection solutions tailored to meet the varied needs of high bandwidth users.

- *Extensive Patent Portfolio* . Our patent portfolio includes patents covering technologies ranging from data and voice services, to content distribution, to transmission and networking equipment. We utilize our patent portfolio in multiple ways. Developing or acquiring technologies and receiving the legal right to preclude others from using them may give us a competitive advantage. The breadth and depth of our patent portfolio may deter others, particularly telecommunications operators, from bringing patent infringement claims against us for fear of counter-claim by us and enhances our ability to enter into cross-licensing arrangements with other patent holders. We will continue to file new patent applications as we enhance and develop products and services, we will continue to seek opportunities to expand our patent portfolio through strategic acquisitions and licensing, and we will continue to appropriately enforce our patents against infringement by others.

- *A More Readily Upgradeable Network Infrastructure.* We generally endeavor to design new networks to take advantage of technological innovations, incorporating many of the features that are not present in older communications networks. We design the transmission network to optimize aspects of fiber and optronics simultaneously as a system to provide an efficient cost structure for the services that we deliver to our customers. As fiber and optical transmission technology changes, we expect to realize new unit cost improvements by deploying more cost efficient technologies in our network. We believe that our network, process and system design will enable us to provide competitive services to our customers while also lowering our costs to provide those services .

Our Service Offerings

We offer a broad range of communications services. All of our services can be purchased by any of our customers, but some services may not be available in all locations or jurisdictions. The following is an overview description of some of the services that we offer.

Core Network Services. The following are the communications services that are included in our financial reporting of Core Network Services revenue.

- *IP and Data* Services. Data services include Internet Services, virtual private network ("VPN"), content delivery network ("CDN"), media delivery, Vyvx broadcast service and Managed Services.

  - *Internet Services.* We offer wholesale and content provider customers with high speed access to the Internet over one of the largest international Internet backbones. Using largely our own intercity and metropolitan networks in North America, Europe and Latin America, we provide customers with high performance, reliability and scalability. Access to the Internet is enabled through interconnection among our customers across our network as well as interconnections with other Internet service provider "peers."

  - The service is available stand-alone or in conjunction with managed services offerings, such as Managed Router where we deploy and manage a router that is on the customer premise or our network-based Distributed Denial of Service, or DDoS, Mitigation, which protects our business customers from Internet based DDoS attacks.
  - *VPN Service.* Built on our optical transport network, we offer customers the ability to create private point-to-point, point-to-multipoint, and full-mesh networks based on IP VPN, Virtual Private LAN service, or VPLS, Ethernet Virtual Private Line, or EVPL, or MPLS VPN technologies. These services allow service providers, enterprises and government entities to replace multiple networks with a single, cost-effective solution that simplifies the transmission of voice, video, and data over a single or converged network, while delivering high quality of service and security. These services are used for service provider and corporate data and voice networks, data center networking, disaster recovery and out-of-region or redundant customer connectivity for other service providers. VPN services are sold stand-alone or in conjunction with our managed services offerings.

  - *Level 3 Ethernet Services or E-Services* . Provide customers with geographically diverse, data intensive networks; scale, flexibility and reliability in order to meet existing and future networking demands. Level 3 E-Services encompasses E-Line and E-Access.

    - *Level 3* SM *E-Line services* offers a secure, high-performance network solution that enables voice, video and data applications. With end-to-end availability, class of service, and latency service level commitments customers can rely on Level 3 E-Line service as the foundation for delivering applications such as high-performance computing, data replication, storage and archival, business continuity, voice communications and video conferencing.

    - Level 3 SM E-Line Service with Adaptive Network Control offers secure, high availability and scalable network connections with dynamic bandwidth making it ideal for providing high-speed connections among corporate headquarters, data centers and other business locations around the world to migrate legacy networks and equipment to Ethernet, expand existing WANs and get new applications online faster.

    - Adaptive *Network Control Solutions* provide added capabilities that are layered on to network services to provide greater visibility, flexibility and control of applications traffic traversing your Metro or Wide Area Network:

    - *Enhanced Management* is real time visibility of end-to-end network performance metrics to assist planning, trouble shooting and fine tuning your network for optimal performance. Available for all managed locations and backed by comprehensive service level agreements.

    - Dynamic *Capacity* , which is the ability to make real-time bandwidth adjustments via our *MyPortal* customer portal to address fluctuating traffic demands.

- *CDN Services* . Our content delivery network services combine our IP network, Gateway facilities and patented technology that directs a requestor or end user to the best location or server cluster in our network to retrieve the requested content based on location and network conditions. Our CDN service provides customers with improved performance, economics, scalability, reliability and reach for their web applications. Our caching and download services provide efficient http delivery of large files such as video, software, security patches, audio and graphics to mass audiences. Our streaming service can be used to deliver high performance streams, either live or on-demand, to end users using leading proprietary protocols. Each service set provides flexible features to enable customers to control their content delivery to ensure quality end-user experience, security, freshness and targeting. We also offer storage solutions enabling customers to upload and store content to our network as part of an optimized delivery platform. In addition to our delivery services, our patented Intelligent Traffic Management service enables customers to set rules to dynamically route traffic to meet failover or dual vendor objectives.

- *Media Delivery Service* . We offer media delivery service to customers seeking to manage, protect and monetize content delivered over the Internet. Our media delivery service extends support for online distribution models and operation by providing customers with means to ingest and digitize live video content and to manage the organization and presentation of both live and on demand video to end users via a content management system. Additionally, support for content monetization via paid and advertising supported models is provided. Our media delivery services leverage our content delivery network for the delivery of managed content to end users.

- *Vyvx Broadcast Service* . We offer various services to provide audio and video feeds over fiber or satellite for broadcast and production customers. These services vary in capacity provided, frequency of use (that is, may be provided on an occasional or dedicated basis) and price.

- *Managed Services.* This category includes our complete portfolio of advanced performance and managed services, including professional services. Our teams of professionals work with customers to design and customize solutions that match their strategy and can help customers increase network efficiency, reduce overall operational costs, supplement skill sets, or provide specialist knowledge. Services included Managed Router, Application Performance Management, Managed WAN Optimization, Managed Ethernet Services and a variety of other professional services to meet customer needs. Managed Services are purchased in conjunction with our other network services.

- *Cloud and IT Services.* Our multi-disciplinary cloud services draw on many products across our products that are described above. Our Cloud and IT-based services include Level 3 Cloud Connect Solutions, Communications as a Service and Data Center Services. These solutions are focused on the transport and delivery of enterprise data and applications.

- *Level 3 Cloud Connect Solutions* . Level 3 Cloud Connect Solutions create a secure, reliable path for customers to realize the efficiency, scalability and flexibility of the cloud, providing a private network that connects enterprises with leading cloud and data center providers around the world, including Amazon Web Services (AWS), Google Cloud Platform and Microsoft Azure ExpressRoute.

- *Communications as a Service (CaaS)* . Our Communications as a Service (CaaS) product offering delivers a Session Initiated Protocol, or SIP, based audio collaboration and on-net web conferencing over a virtual private network using a hosted model.

- *Transport and Fiber Services.* Transport services include wavelengths, private lines, transoceanic services, and dark fiber, as well as related professional services. These services are available across our metropolitan and intercity fiber network. Wavelength services provide unprotected point-to-point connections of a fixed amount of bandwidth with Ethernet or SONET interfaces. Wavelength services are available at a range of speeds from 1 Gbps to more than 100 Gbps. This service offering targets customers that require significant amounts of bandwidth, desire more direct control and provide their own network management. Private line services are also point-to-point connections of dedicated bandwidth but include SONET or Synchronous Digital Hierarchy (SDH) protection to provide resiliency to fiber or equipment outages. Private line services are available in a wide range of speeds with electrical, optical and Ethernet interfaces. We also provide transport services within our transatlantic cable system connecting North America, Europe and Latin America as well as via leased bulk capacity on other transoceanic systems. International backhaul transport services, interconnecting cable landing stations and our terrestrial North American, European and Latin American networks, are also available.

  Our dark fiber service provides carriers, service providers, government entities and enterprises a fiber solution when unique applications, control or scale requirements make this service desirable. This includes fiber, colocation space in our Gateways and in our network facilities, power and physical operations and maintenance of the fiber and associated infrastructure. Professional services related to our transport and fiber services include network architectural design, engineering, installation and turn-up, ongoing network monitoring and management services, and field technical services.

- *Voice Services* . We offer a broad range of local and enterprise voice services including VoIP (Voice over Internet Protocol) services and traditional circuit-switch based services. Our local and enterprise voice services include VoIP enhanced local service, SIP Trunking, local inbound service, Primary Rate Interface ("PRI") service, long distance service, toll free service and a comprehensive suite of audio, web and video collaboration services. The following is a general description of our voice services. Some of the following services are also offered to our wholesale voice customers. For financial reporting purposes, voice services also include our collaboration services that are described below.

  - *VoIP Enhanced Local.* Our VoIP enhanced local service is a VoIP service that enables broadband cable operators, IXCs, voice over IP providers, and other companies operating their own switching infrastructure to launch IP-based local and long-distance voice services via any broadband connection.

  - *SIP* Trunking . SIP Trunking is an IP-based local phone service offered to medium and large enterprises as a replacement for traditional fully featured enterprise TDM voice services. SIP Trunking allows customers with an IP PBX to manage calls to and from the PSTN without having to purchase traditional access lines dedicated to voice.

  - *Local Inbound.* Our local inbound service terminates traditional telephone network originated calls to Internet Protocol termination points. This one-way service is sold primarily to customers, such as call centers, conferencing providers, voice over IP service providers and enterprises to only receive calls at their locations. The customers can obtain telephone numbers from us or port-in local telephone numbers that the customer already controls. These local calls are then converted to IP and transported over our backbone to a customer's IP voice application at a customer-selected IP voice end point.

  - *Enterprise Long Distance.* Our long distance service portfolio consists of local and long distance transport and termination services. Medium and large enterprises purchase our long distance services for their corporate calling or outbound contact center needs. All Level 3 long distance services are offered at the customer's option over circuit switch or softswitch technologies.

  - *Enterprise Toll Free* . Our toll free service terminates toll free calls that are originated on the traditional telephone network. These toll free calls are carried over either a circuit switch or softswitch network and delivered to customers in Internet Protocol or traditional TDM format.
  - *Collaboration Services* . We offer a comprehensive suite of audio, web and video collaboration services, which include the following services:

    - *Audio* Conferencing . *Ready-Access* ®, our on-demand/reservation less audio conferencing service, provides toll free access in key business markets worldwide. We also provide operator-assisted, full-service conference calls where participants can access our service by dialing in on either a toll or a toll-free number, or by being dialed out to by an operator.

    - *Web Conferencing.* Our *Ready-Access Web Meeting* is fully integrated with *ReadyAccess* audio conferencing for on-demand collaboration, allowing customers to manage their calls on-line, change account options, share presentations with participants and record entire meetings, including visuals. *eMeeting* is a full-featured Web conferencing application that allows customers to collaborate and share documents, presentations, applications, data and feedback with polling and instant messaging features. *Live Meeting* service uses technology licensed from Microsoft ®

to allow multiple attendees to participate in meetings using only their computer, a phone, and an Internet connection. We have integrated *Ready-Access* as an audio conferencing component into *Live Meeting* .

- *Videoconferencing Service.* Our videoconferencing service provides video over IP and ISDN platforms, using multi-point bridging to connect multiple sites. Enhanced options available with our videoconferencing services include scheduling, recording and hybrid meetings that combine our audio and video services.

- *Colocation and Data Center Services* . Colocation and Data Center services include data center facilities and services including cloud, hosting, and application management solutions. Our data center facilities offer high quality, data center space where customers can locate servers, content storage devices and communications network equipment in a safe and secure technical operating environment. In addition, we offer high-speed, reliable connectivity to our network and to other networks, including metro and intercity networks, the traditional public switched telephone network and the Internet. Our data center services range from dedicated hosting and cloud services to more complex managed solutions, including disaster recovery, business continuity, applications management support, and security services to manage mission critical applications.

- *Security Services.* Also reported in this category, Level 3 Network-Based Security Solutions use our expansive view of the threat landscape to enable customers to address the escalating risk of cyber-attacks. The solutions allow customers to create a secure network, safeguard brand value, enable business continuity, and avoid complexity and cost. Our Security Services include: Adaptive Network Security, a fully managed and maintained cloud-based network security option to protect all layers of the enterprise including intrusion protection, data loss protection and Web content filtering; Adaptive Threat Intelligence, which provides actionable threat intelligence for a customer's network, automatically identifying and prioritizing risks in a tailored portal or integrated into a customer security information and event management, or SIEM; network-based Distributed Denial of Service (DDoS) Mitigation, which protects against internet-based DDoS attacks; and Professional Security Services for governance, risk management, and compliance. Security Services are sold stand-alone or in conjunction with Data Services.

Wholesale Voice Services. Our Wholesale Voice Services include voice termination and toll free service. These services share many of the same features as the local and enterprise voice services described above.

- *Voice Termination* . Our wholesale long distance offer include domestic and international voice termination services targeted to IXCs, wireless providers, local phone companies, cable companies, resellers and voice over IP providers.

- *Toll Free.* As with Enterprise Toll Free, Level 3's wholesale Toll Free service terminates toll free calls that are originated on the traditional telephone network. Customers for these services include call centers, conferencing providers, and voice over IP providers.

Our priority remains to protect the confidentiality of our customers' data, and to protect and secure our network. In addition, it is our policy and our practice to comply with laws in every country where we operate, and to provide government agencies access to customer data only when we are compelled to do so by the laws in the country where the data is located. We will continue to operate our global network in this manner to comply with applicable laws and the regulatory requirements of the telecommunications industry.

For a discussion of certain geographic information regarding our revenue from external customers and long-lived assets and a discussion of financial information and operating segments, please see the notes to our consolidated financial statements appearing elsewhere in this annual report on Form 10-K. For a discussion of our communications revenue, please see Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” appearing later in this Form 10-K.

Our management continues to review our existing lines of business and service offerings to determine how those lines of business and service offerings align with our strategy and our financial objectives. This exercise takes place in the ordinary course of our business. To the extent that certain lines of business or service offerings are not considered to be compatible with our strategy or with our financial objectives, we may exit those lines of business or stop offering those services in part or in whole.

Our Distribution Strategy

Our customers generally include the following types of customers: Enterprises (including Content and Government customers) and Wholesale. Our enterprise customers include:

- large multinational customers;
- larger enterprises that purchase communications services in a manner similar to carriers;
- enterprises that purchase communications services on a regional or local basis;
- portals and large search enterprises;
- regional service providers;
- systems integrators; and
- software service providers.

Our Content customers comprise subgroups of customers including:

- Digital Entertainment, such as providers of online gaming; social networking providers; technology companies that enable digital advertising and digital ad agencies; and companies that provide video over the Internet;
- Media and Entertainment, such as media conglomerates; programmers; studios and production companies; and broadcast station ownership groups; and
- Sports teams (professional and college); and stadiums and venues.

Our Government customers include U.S. Federal government departments and agencies, the government departments and agencies of other countries around the world, U.S. states and municipalities as well as research and educational consortia.

Our Wholesale customers include domestic and international carriers; voice service providers, which include calling card companies, conferencing providers, and contact centers that use VoIP technology to better manage costs and enable advanced applications; wireless providers; and broadband cable television operators.

To implement our strategy and reach our target large, multinational enterprise customers, we have a Global Account Management team, which operates across our regions. In North America we also have a General Manager sales model to target enterprises that are not Global Account Management accounts and government customers, where sales leaders manage sales, sales support, marketing, service delivery, service assurance, network planning and financial personnel. In North America, we also use an inside or call center based sales force, and indirect sales channels of third-party agents to reach our target customers.

In EMEA and Latin America, our sales teams use a combination of a direct sales force, an inside or call center based sales force, and indirect sales channels of third-party agents.

The specific elements that we use to reach our target customers depend upon the nature of the customers that are being targeted.

Our sales functions are supported by dedicated employees in sales and customer target marketing. These sales functions are also supported by centralized service or product management and development, general or corporate marketing, network services, engineering, information technology, and corporate functions including legal, finance, strategy and human resources.

For the year ended December 31, 2016 , our top ten communications customers represented approximately 16% of our total revenue.

For a discussion of certain geographic information regarding how we manage our business, please see the discussion under Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” appearing later in this Form 10-K.

Our Communications Network

Our network is an advanced, international, facilities based communications network. We primarily provide services over our own facilities. As of December 31, 2016 , our network encompasses:

- approximately 106,000 intercity route miles in North America, Europe and Latin America;
- metropolitan fiber networks in approximately 350 markets containing approximately 69,000 route miles;
- approximately eight million square feet of Gateway and transmission facilities in North America, Europe and Latin America;
- more than 360 colocation and data center facilities globally;
- approximately 37,500 route miles of subsea optical fiber cable systems; and
- more than 60 countries in service around the world.

Terrestrial Intercity Networks . Our intercity network covers approximately 70,000 route miles in North America, 26,000 route miles in Europe, and 10,000 route miles in Latin America as of December 31, 2016 . We may eliminate specific routes or duplicate routes as we continue to look at opportunities to optimize our cost structure and remove unnecessary cost. Our intercity network generally includes the following characteristics:

Optical fiber strands designed to accommodate Dense Wave Division Multiplexing, or DWDM, transmission technology . Our optical fiber strands are designed to accommodate DWDM technology. We believe that the installation of newer optical fibers will allow a combination of greater wavelengths of light per strand, higher transmission speeds and longer physical spacing between network electronics. We also believe that each new generation of optical fiber will allow increases in the performance of these network design aspects and will therefore enable lower unit costs.

High speed intercity DWDM equipment . Our high speed intercity DWDM equipment provides high quality, reliable and cost effective transmission across our fiber backbone. We are continually evaluating advancements in technology that will enable us to scale, lower our cost and provide higher speed services over our intercity network. We believe that the market will continue to move toward Ethernet based services and higher speed interfaces. Through our technology evaluations we believe that we have positioned ourselves to be able to deliver these capabilities for both our own IP network needs as well as those of our customers.

Open, non- proprietary *hardware and software interfaces* . Our intercity network is designed to maximize the use of open, non-proprietary hardware and software interfaces to allow less costly upgrades as hardware and software technology improves.

Local Market Infrastructure . Our local facilities include fiber optic metropolitan networks connecting our intercity network and Gateways to buildings housing communications intensive end users, enterprise customers and traffic aggregation points-including ILEC and CLEC central offices, long distance carrier points-of-presence or POPs, cable head-ends, wireless providers' facilities and Internet peering and transit facilities. Our high fiber count metropolitan networks allow us to extend our services directly to our customers' locations at low costs, because the availability of this network infrastructure does not require extensive multiplexing equipment to reach a customer location, which is required in ordinary fiber constrained metropolitan networks. As of December 31, 2016 , we had approximately 59,000, 3,200 and 6,800 route miles of metropolitan fiber networks in North America, Europe and Latin America, respectively, and had operational, facilities based, local metropolitan networks in 229, 59, 52 and 2 markets in North America, Europe, Latin America and Asia, respectively. We may eliminate specific and/or duplicate routes as we continue to look at opportunities to reduce and/or optimize our network cost structure.

We operate approximately eight million square feet of space for our Gateway and transmission facilities. Our initial Gateway facilities were designed to house local sales staff, operational staff, our transmission and Internet Protocol routing, Content Delivery Networks and voice switching facilities and technical space to accommodate colocation services that is, the colocation of equipment by high-volume Level 3 customers, in an environmentally controlled, secure site with direct access to Level 3's network generally through dual, fault tolerant connections. As of December 31, 2016 , we had more than 250 colocation facilities in North America, approximately 90 colocation facilities in Europe, and approximately 15 colocation facilities in Latin America.

Most of these facilities offer a complete set of data center services ranging from housing and hosting, to more complex managed solutions, including disaster recovery, applications management, business continuity, and security services to manage mission critical applications.

Transoceanic Networks . We own a number of subsea fiber optic cable systems, including Atlantic Crossing-1 ("AC-1"), Atlantic Crossing-2 ("AC-2"), Mid-Atlantic Crossing ("MAC"), South American Crossing ("SAC"), Pan American Crossing ("PAC") and an approximately 300 route mile system connecting the U.K. and Ireland. AC-1 and AC-2 link our European network to our North American intercity network and each of AC-1 and Yellow (AC-2) consists of four fiber strand pairs. MAC provides a strategic gateway between the Eastern Seaboard of the U.S. and our Latin America assets, a route that is experiencing acute demand growth. SAC connects major markets throughout Latin America and is one of only two sub-sea systems currently in operation that circumnavigates the majority of South America including an extension into Colombia. PAC is integrated with a 2,300 mile terrestrial ring route (including associated backhaul) within Mexico, as well as an extension to Costa Rica.

We also own capacity in the TAT-14 transatlantic cable system. In 2016 we purchased and lit a fiber pair on the Apollo South cable system. We also are an owner of the Japan-US cable system, (were an owner on the China-US cable system which retired in December 2016), an indefeasible right of use, or IRU, holder on the Southern Cross cable system extending from Australia to California, as well as an owner of the Americas II cable extending from Florida to Brazil, and an IRU holder on the Arcos system in the Caribbean. We also own a share in the Hawaiian Inter Island Fiber Network (HIFN). In addition, we own capacity on the Global Cloud Exchange transatlantic system Flag Atlantic-1 and capacity on the Hibernia transatlantic cable system and also the Apollo North cable system.

Content Acquisition and Distribution Services Architecture . Content distribution network, or CDN, describes a system of computers networked together across the Internet to provide content to users in the most efficient manner to enable an optimal user experience. In a CDN, nodes or groups of computers are deployed in multiple locations closer to the end user, also known as the “edge of the network” and cooperate with each other to satisfy requests for content by end users, transparently moving content behind the scenes to optimize the delivery process. Requests for content are directed intelligently through sophisticated software applications to nodes that provide optimal performance for end users.

The CDN platform directs network traffic across our existing physical network and infrastructure. The CDN platform is composed of the edge server or computer that provides caching and streaming functions, and the global server that provides load balancing-that is, a computer that directs the traffic to the most efficient edge server to meet the end user’s request. The edge server enables the storage of popular content in a location that is closer to the end user and thereby reduces bandwidth requirements and improves response times for that stored content.

The Vyvx platform transmits audio and video programming for our customers over our fiber optic network and via satellite. We use our network to carry many live traditional broadcast and cable television events from the site of the event to the network control centers of the broadcasters of the event.

Our Patent Portfolio

Through acquisitions and through our own research and development, as of December 31, 2016 , we have more than 1,400 patents and patent applications in the United States and around the world. Our patent portfolio includes patents covering technologies ranging from data and voice services to content distribution to transmission and networking equipment.

In addition to the patents and patent applications we own, we have received licenses to patents held by others, including through a cross-license agreement with IBM entered into in December 2007, giving us access to technology covered by IBM’s approximately (at that time) 42,000 patents covering many technologies relevant to our business. While patents give us the right to prevent others, particularly competitors, from using our proprietary technologies, patent licenses give us the freedom to operate our business without the risk of interruption from the holder of the patent that has been licensed to us.

We use our patent portfolio in a number of ways. First, developing or acquiring technologies and receiving the legal right to preclude others from using them may give us a competitive advantage. Second, the breadth and depth of our patent portfolio may deter others, particularly telecommunications operators, from bringing patent infringement claims against us for fear of counter-claim by us. Most of the patent infringement suits brought against us to date have been initiated by patent-holding companies who do not operate telecommunications businesses and who are less likely to be subject to a counter-claim of infringement by us. Finally, the extensiveness of our patent portfolio gives us the option to cross-license with others having similarly broad portfolios on terms acceptable to us, mitigating the risk that others will wish to assert patent infringement claims against us.

We will continue to file new patent applications as we enhance and develop products and services, we will continue to seek opportunities to expand our patent portfolio through strategic acquisitions and licensing and we will continue to appropriately enforce our patents against infringement by others.

Business Support Systems

We believe that it is important to streamline and simplify our processes and systems. To pursue our business strategies, we have developed and are continuing to develop and implement a set of integrated software applications designed to automate our operational processes. These development activities also relate to the integration of the systems that were used by the companies that we have acquired. Through the development of our business support systems, we believe that we have the opportunity to obtain a competitive advantage relative to traditional telecommunications companies. In addition, we recognize that for the success of certain of our services that some of our business support systems will need to be easily accessible and usable directly by our customers.

We are currently developing and deploying a unified set of simplified processes and systems that have been designed to streamline and synchronize our service, sales and operational functions. These processes and systems have been designed to provide improved capability in service catalog management, sales opportunity management, customer management, quoting, order entry, order workflow, physical and logical network inventory management, service management, and financial management.

Key design aspects of the business support system development program are:

- integrated modular applications to allow us to upgrade specific applications as new services are available;
- a scalable architecture that allows our customers and third-party sales channel partners direct access to certain functions that would otherwise have to be performed by our employees;
- phased completion of software releases designed to allow us to test functionality on an incremental basis;
- “web-enabled” applications so that on-line access to order entry, network operations, billing, and customer care functions are available to all authorized users, including our customers;
- use of a service-oriented architecture that is designed to separate data and applications, and is expected to allow reuse of software capabilities at minimum cost;
- use of pre-developed, commercial “off-the-shelf” applications or Software as a Service (SaaS), where applicable, which will interface with our internally developed applications; and
- creation of a mobility solution for use by sales and certain operational functions to improve productivity and customer experience.

Competition

The communications industry has been and remains highly competitive. In the late 1990s and the early 2000s, significant new capacity was deployed by both existing and new entrants. This oversupply led to a period of financial restructuring and industry consolidation. Given the significant economies of scale inherent in the communications industry, we believe further consolidation will occur such as CenturyLink’s acquisition of us and Verizon’s recently completed acquisition of XO .

Our primary competitors are long distance carriers, ILECs, CLECs, Post Telephone and Telegraphs, or PTTs, companies that operate Content Delivery Networks, or CDNs, and other companies such as cable companies, that provide communications services. The following information identifies some key competitors for each of our service offerings.

Our key competitors for our IP and data services include Verizon, AT&T, NTT, Tata and Cogent in North America, and BT, Orange, TeliaSonera and Tata in Europe. In Latin America, our main competitors are Telefonica, Telmex and national incumbent telecommunications carriers.

For transport and fiber services, our key competitors in North America are other facilities based communications companies including AT&T, Verizon, CenturyLink, and Zayo. In Europe, our key competitors are other carriers such as PTT companies, BT, Orange, Vodafone, TeliaSonera, Colt, Interoute, KPN, Belgacom and Zayo. In Latin America, our main competitors are Telefonica, Telmex and national incumbent telecommunications carriers.

For voice services our key competitors are other providers of communications services including AT&T, Verizon, CenturyLink, CLECs and national incumbent telecommunications carriers.

For our colocation and datacenter services, our key competitors are other facilities based communications companies, and other colocation providers such as web hosting companies and third-party colocation companies. In North America, these companies include Equinix, Terremark (Verizon), and CoreSite. In Europe, competitors include Equinix, Global Switch, InterXion, and Telehouse Europe. In Latin America, our largest competitors include Telefonica, Telmex, and IBM.

For CDN services, our key competitors include Akamai Technologies, Limelight Networks, Amazon, Edgecast Networks (Verizon), Fastly and CDNetworks .

For security services, our key competitors include Akamai, Verizon, CenturyLink, AT&T and Cloudflare.

In the enterprise and government markets, our key competitors in North America include ILECs (such as AT&T, Verizon and CenturyLink) and CLECs. In Europe, they include BT, Vodafone, Deutsche Telekom and Orange. In Latin America, competitors include Telefonica and Telmex.

The communications industry is subject to rapid and significant changes in technology. For instance, periodic technological advances permit substantial increases in transmission capacity of both new and existing fiber, and the introduction of new products or emergence of new technologies may reduce the cost or increase the supply of certain services similar to those which we plan on providing. Accordingly, in the future our most significant competitors may be new entrants to the communications industry, such as content companies that have existing significant customer bases and substantial cash resources that are greater than ours, and, unlike the traditional incumbent carriers we also compete with, would not be burdened by an installed base of outmoded or legacy equipment.

Regulation

U.S. Regulation

Federal Regulation

The Federal Communications Commission ("FCC") has jurisdiction over interstate and international communications services. We have obtained FCC approval to land our transoceanic cables in the United States. We have also obtained FCC authorization to provide international services on a facilities and resale basis, as well as via various wireless licenses. Under the

Telecommunications Act of 1996 (the “1996 Act”), any entity, including cable television companies and electric and gas utilities, may enter any telecommunications market, subject to reasonable state regulation of safety, quality and consumer protection. The United States House of Representatives Energy and Commerce Committee continues to consider revising and updating the 1996 Act, including potential changes to the FCC, its jurisdiction, its operating procedures and its organizational structure. It is too early in this process for us to either predict any modifications that might be made to the 1996 Act as part of this process, their effects on us, or the pace at which this process may proceed.

The 1996 Act previously required certain tariffs to define the services, terms, and conditions under which said services were to be offered. Subsequent deregulatory measures have eliminated some tariff requirements for competitive services.

Accordingly, as of August 1, 2001, our tariffs for interstate end user services were eliminated and our tariffs for international interexchange services were eliminated on January 28, 2002. Our rates must still be “just and reasonable” and “nondiscriminatory” under the 1996 Act. Our state tariffs remain in place where required (some states do not have, or have eliminated, the requirement to file certain tariffs). We have historically relied primarily on our sales force and marketing activities to provide information to our customers regarding these matters and expect to continue to do so. Further, in accordance with certain FCC tariff filing requirements, we maintain a schedule of our rates, terms and conditions for our domestic and international private line services on our web site.

Special Access Regulation. Special access services are “lit” loop or transport facilities that support the transmission of data on a point-to-point basis, often referred to as “private lines.” Level 3 purchases a substantial amount of special access services from ILECs and other telecommunications carriers to reach customer premises and, less frequently, to support interoffice transport requirements. In addition, Level 3 provides special access services to end user customers and to other carriers via its own network and/or through the resale of other carriers’ special access services.

In January 2005, the FCC commenced an examination of the regulatory framework governing the rates, terms, and conditions under which ILECs subject to “price cap” regulation provide interstate special access services. In this rulemaking, the FCC is reviewing both the price cap regime by which ILEC special access rates are set in most areas, as well as the “pricing flexibility” regime under which ILECs have obtained, in so-called “phase I” areas, the ability to enter into more individualized relationships with customers and to lower prices, and in so-called “phase II” areas, the ability to raise prices based upon certain threshold showings of the presence of competitors in a specific geographic and product market. In August 2012, the FCC froze further grants of pricing flexibility. In December 2012, the FCC issued an order stating that it will gather additional data on a mandatory basis from both providers and purchases of special access services so that it can conduct a comprehensive evaluation of the state of competition in the special access market. Responses to these additional, mandatory data requests were made in early 2015, but we cannot predict when or whether the FCC will complete its review of the data submitted, or what the outcome of its review will be. In 2016, the FCC prospectively limited certain tariff terms of price cap ILECs, known in the industry as “demand lock-up” terms. We cannot predict, however, whether these rulings will be challenged given the new makeup of the FCC following the 2016 U.S. Presidential election, and if challenged, what the result will be.

Network Neutrality and Open Internet. On February 26, 2015, the FCC adopted its most recent Open Internet order, the Open Internet Remand Order. The 2015 Order prohibits broadband providers from: blocking access to lawful content; impairing or degrading (also known as throttling) Internet traffic; prioritizing some content over other content in exchange for payment or other consideration; or unreasonably interfering with or disadvantaging the ability of users to access lawful content. The 2015 Order also provides the Commission with authority to hear complaints regarding interconnection disputes with broadband providers. The 2015 Order was challenged in court and, in an initial ruling, was upheld, but the appeal process is still on-going. There have also been a variety of legislative efforts to water down the 2015 Order, and the 2015 Order may be revisited given the new makeup of the FCC following the 2016 U.S. Presidential election. We cannot predict the outcome of such initiatives.

IP Interconnection. We have noted IP interconnection and congestion disputes with last mile bottleneck broadband providers, some of which historically refused to augment (or add) bandwidth at congested interconnection links between our respective networks (which is known to degrade the quality of third party content) without the payment of tolls unilaterally dictated by the broadband supplier. During 2015 and 2016 , we concluded improved IP Interconnection agreements with several large broadband providers, some of which were announced publicly. We cannot predict at this time whether these arrangements will in all cases provide us with sufficient last mile interconnection capacity to avoid Internet congestion as the Internet continues to grow and/or when these agreements expire. The FCC's current Open Internet rules provide Level 3 a forum to lodge interconnection disputes with the FCC for resolution, but how such disputes would be resolved, as well as the future of these Open Internet Rules, is unclear (see " *Network Neutrality and Open Internet"* discussion immediately above).

Intercarrier Compensation. Telecommunications carriers compensate one another for traffic carried on each other's networks. Interexchange carriers pay access charges to local telephone companies for long distance calls that originate and terminate on local networks. Local telephone companies typically charge one another for local and Internet-bound traffic terminating on each other's networks. The methodology by which carriers compensate one another for exchanged traffic, whether it be for local, intrastate or interstate traffic, has been under review by the FCC for over a decade.

In November 2011, the FCC released its Universal Service Fund/Intercarrier Compensation Transformation Order (USF/ICC Transformation Order). Along with addressing other matters, the USF/ ICC Transformation Order established a prospective intercarrier compensation framework for terminating switched access and VoIP traffic. Under the USF/ICC Transformation Order and subsequent related FCC orders, most terminating switched access charges and all reciprocal compensation charges were capped at then-current levels, and will be reduced to zero over, as relevant to Level 3, generally a six year transition period that began July 1, 2012.

Level 3 maintains approximately 300 interconnection agreements with other telecommunications carriers. These agreements set out the terms and conditions under which the parties will exchange traffic. The largest agreements are with AT&T and Verizon. Most of Level 3's agreements with AT&T and Verizon have expired terms, but remain effective in evergreen status. As these and other interconnection agreements expire, we will continue to evaluate simply allowing them to continue in evergreen status (so long as the counterparty allows it) or negotiating new agreements. Any renegotiation would involve uncertainty as to the final terms and conditions, including the compensation rates for various types of traffic. In addition, changes in law, including FCC orders, may allow or compel us to renegotiate current and successor interconnection agreements over the next year.

Intercarrier Compensation/VoIP. Pursuant to the USF/ICC Transformation Order, VoIP, while remaining unclassified as either an information or a telecommunications service, was prospectively categorized as either local or non-local traffic. If "local", then VoIP traffic is subject to reciprocal compensation; if "non-local", then it is subject to interstate rates, thus eliminating any intrastate access rate applicable to VoIP. The USF/ICC Transformation Order did not address the treatment of VoIP retroactively. Level 3 is involved in a number of intercarrier compensation disputes dealing with the rating of VoIP traffic. During 2015, the FCC issued clarifications concerning the rating of VoIP traffic that were favorable to Level 3. Those clarifications were appealed, with the Court ruling that additional action by the FCC is required to sustain its prior findings. This initial ruling has been further appealed. At this time, we cannot predict the outcome of these appeals.

Other VoIP Regulation. The FCC has imposed various regulatory requirements on VoIP providers that had previously been applicable only to traditional telecommunications providers, such as obligations to provide 911 functionality, contribute to the federal universal service fund, to comply with regulations relating to local number portability (including contributing to the costs of managing number portability requirements), to abide by the FCC's service discontinuance rules, to contribute to the Telecommunications Relay Services fund, and to abide by the regulations concerning Customer Proprietary Network Information and the Communications Assistance for Law Enforcement Act. In addition, a number of state public utility commissions are conducting regulatory proceedings that could affect our rights and obligations with respect to IP-based voice applications. Specifically, some states have taken the position that the "local" component of VoIP service is subject to traditional regulations applicable to local telecommunications services, such as the obligation to pay intrastate universal service fees. We cannot predict whether the FCC or state public utility commissions will impose additional requirements, regulations or charges upon our provision of services related to IP communications.

Intercarrier Compensation/Wireless. There are currently a number of lawsuits ongoing in the United States concerning the intercarrier compensation charges applicable to certain wireless telephone calls, how to determine whether those calls were local or long distance under the applicable rules, and what statute of limitations applies to such claims. We are defendants in certain of these lawsuits, and are potential plaintiffs in others. As with any litigation, the outcome of this litigation is difficult to predict.

Universal Service. Level 3 is subject to federal and state regulations that implement universal service support for access to communications services in rural and high-cost areas and to low-income consumers at reasonable rates; and access to advanced communications services by schools, libraries and rural health care providers. The FCC assesses Level 3 a percentage of interstate and international revenue it receives from retail customers as its contribution to the Federal Universal Service Fund, which assessments are generally passed on to our customers. Additionally, the FCC has ruled that states may assess contributions to their state Universal Service Funds from VoIP providers. Any change in the assessment methodology may affect Level 3's revenue and expenses, but at this time it is not possible to predict the extent we would be affected, if at all.

Network Security Agreement . In connection with the acquisition of Global Crossing, we entered into an agreement (the "Network Security Agreement") with certain agencies of the U.S. Government to address the U.S. Government's national security and law enforcement concerns. The Network Security Agreement is intended (i) to ensure our ability to carry out lawfully authorized U.S. Government electronic surveillance of communications that originate and/or terminate in the U.S.; (ii) to prevent and detect access to and use of U.S. communications; and (iii) to satisfy U.S. critical infrastructure protection requirements. Failure to comply with our obligations under the Network Security Agreement could result in the revocation of our telecommunications licenses by the FCC and other penalties. The Network Security Agreement also imposes significant requirements related to information storage and management, traffic routing and management, physical, logical and network security, personnel screening and training, audit, reporting and other matters.

State Regulation

The 1996 Act is intended to increase competition in the telecommunications industry, especially in the local exchange market. With respect to local services, ILECs are required to allow interconnection to their networks and to provide unbundled access to network facilities, as well as a number of other pro-competitive measures.

State regulatory agencies have jurisdiction when our facilities and services are used to provide intrastate telecommunications services. A portion of our traffic may be classified as intrastate telecommunications and therefore subject to state regulation. We expect that we will offer more intrastate telecommunications services (including intrastate switched services) as our business and product lines expand. We are authorized to provide telecommunications services in all fifty states and the District of Columbia. In addition, we need to maintain interconnection agreements with ILECs where we wish to provide service. We expect that we should be able to negotiate or otherwise obtain renewals or successor agreements through adoption of others' contracts or through arbitration proceedings, although the rates, terms, and conditions applicable to interconnection and the exchange of traffic with certain ILECs could change significantly in certain cases. The degree to which the rates, terms, and conditions may change will depend not only upon the negotiation and arbitration process and availability of other interconnection agreements, but will also depend in significant part upon state commission proceedings that either uphold or modify the current regimes governing interconnection and the exchange of certain kinds of traffic between carriers.

There are initiatives in several state legislatures to lower intrastate access rates, aligning them with interstate rates, some of which may be affected by the FCC Order on intercarrier compensation. While we believe that rate adjustment initiatives such as this are generally better considered holistically by the FCC as part of its overall intercarrier compensation reforms, some states have and may continue to determine otherwise. Depending on whether we are a net collector or a net payer of any adjusted rate, such rate adjustments could have a negative effect on us.

Some states also require prior approvals or notifications for certain transfers of assets, customers or ownership of certificated carriers and for issuances by certified carriers of equity or debt.

Local Regulation

Our networks are subject to numerous local regulations such as building/permitting/trenching codes and licensing/franchise fees. Such regulations vary on a city-by-city, county-by-county and state-by-state basis. To install our own fiber optic transmission facilities, we need to obtain rights-of-way over privately and publicly owned land. Rights-of-way that are not already secured, or which may expire and not be renewed, may not be available to us on economically reasonable or advantageous terms in the future.

European Regulation

Unlike the United States which has a federal-state regulatory scheme, the European Union, or EU, has adopted a more systematic approach to the convergence of networks and the regulation of telecommunications services. The European Commission oversees the implementation by its Member States of various directives developed to regulate electronic communications. In March 2002, the European Union adopted a new regulatory framework for electronic communications that is designed to address in a technologically neutral manner the convergence of communications across telecommunications, computer and broadcasting networks. The directives address: (1) framework, (2) interconnection and access, (3) authorization and licensing, (4) universal service, and (5) privacy. These directives along with an additional decision on radio spectrum set out the basis for regulation at the national level.

Pursuant to these measures, the licensing regime was replaced with one of general authorization, whereby all providers of electronic communication services, or ECS, are authorized by statute in all 28 EU countries to (1) build/maintain a network and (2) sell any form of ECS, other than mobile or broadcast services, without the need for an individual license. Accordingly, as for all communications providers, our existing licenses were canceled and replaced with statutory authorization, subject to various general conditions imposed by national regulatory authorities, or NRAs. NRAs continue to be responsible for issuing specific licenses in relation to radio spectrum.

The Framework requires NRAs, on a rolling basis, to analyze a set of markets for electronic communications which may require ex-ante regulation to function competitively.

This analysis contains three different elements:

- Market definition - first the NRA must define the relevant geographic and product market.
- SMP assessment - in a second step the NRA must analyze whether one or more undertaking active in that market possesses significant market power (conceptually similar to dominance), either individually or jointly with others.
- Decision on remedies - if the NRA identifies a market with a lack of effective competition, it is required to impose certain regulatory obligations, so-called remedies.

The basis for this measure is the European Commission's Recommendation on Relevant Markets, which contains a list of markets that should be subject to ex ante regulation. Whenever a NRA concludes that a given market shows failures that hamper competition, it must impose appropriate remedies on undertakings with a significant market power in accordance with the market Access Directive and Universal Service Directives.

In November 2009, the European Parliament and Council of Ministers agreed to implement a number of changes to the existing regime, comprising the "Better Regulation" Directive (Directive 2009/140/EC) and the "Citizens' Rights" Directive (Directive 2009/136/EC), which adjust the existing regulations in order to remove areas of potential ambiguity and more clearly define user rights.

In 2010, the EU adopted a long term strategic policy known as the Digital Agenda for Europe 2010 - 2020, aimed at ensuring that the EU derives the maximum economic, industrial and social benefit from advanced communications services, including the extensive roll-out of 'superfast broadband.' The majority of Member States have each adopted their own national policies in support of this high level agenda.

In November 2015, the EU adopted Regulation EU 2015/2120 which, among other things set out new legislation in relation to open internet. The net neutrality provisions of this Regulation became effective at the beginning of the second quarter 2016. In 2015, the EU Commission also began a review of the entire suite of Directives and Regulations relating to the communications sector and proposals are currently under consideration with a view to agreeing any changes in sufficient time to have these transposed into Member State law by 2019.

Notwithstanding a synchronized approach to regulation in Europe, the implementation of the directives has not been uniform across the Member States of the European Union. Recognizing this concern, in November 2009, the EU also implemented one regulation establishing the Body of European Regulators for Electronic Communications (Regulation (EC) No 1211/2009), or BEREC. BEREC's objective is to improve harmonization between national regulatory measures so as to ensure greater consistency of remedies and to anticipate emerging regulatory requirements. From 2012 through 2016, BEREC adopted a common position on several issues of relevance, including wholesale local and broadband access, wholesale leased lines and net neutrality. BEREC's work program for 2017 published in January 2017, identifies four key areas of focus: (1) promoting competition and investment, with a particular focus on promoting investment in infrastructure and preparing for market developments relating to IP applications; (2) ensuring NRA support for activities that promote the EU internal market, including the ongoing review of the regulatory framework (3) empowering and protecting end-users; and (4) improving the quality and efficiency of regulatory decision making.

United Kingdom 'Brexit'

In June 2016, following a national referendum, the UK decided to cease its membership in the EU. The European Treaty sets out the legal process that must be followed to accomplish this departure, but has not yet been triggered. It is generally expected that the UK will remain a member of the EU until at least 2019. While there is likely to be little immediate effect for the company or its customers, the longer term implications are presently unclear.

Middle East and African Regulation

In recent years, we have expanded our operations beyond the borders of the European Union. While a number of jurisdictions have adopted regulatory regimes broadly similar to the European model and promote full competition, many of the countries in this region have not yet committed to liberalizing their telecommunications regimes and opening their telecommunications markets to foreign investment as part of the 1998 World Trade Organization Agreement on Basic Telecommunications Services. We cannot be certain of how many regional countries may ultimately liberalize their national markets or how quickly change may take place and the effect on our business of future regulatory change cannot be accurately predicted.

Canadian Regulation

The Canadian Radio-television and Telecommunications Commission ("CRTC") regulates telecommunications providers and their service offerings in Canada. Regulatory developments over the past several years have terminated the historic monopolies of the ILECs, bringing significant competition to this industry for both domestic and international long distance services. The provision of Canadian domestic and international transmission facilities based services is no longer restricted to "Canadian carriers". Prior to June 2012, these carriers had to have majority ownership and control in-fact by Canadians. There are no such Canadian ownership and control requirements for companies that resell the services and facilities of a Canadian carrier. Accordingly, we have historically operated as a reseller of Canadian domestic and international transmission facilities-based services in Canada. Material ownership restrictions were repealed, thus allowing us to register with the CRTC as a facilities-based telecommunications common carrier, which we did and also obtained a Basic International Telecommunications Service license, allowing us to carry traffic that originates or terminates in points outside of Canada.

Latin American Regulation

The regulatory status of the telecommunications markets in Latin America varies to some degree. All of the countries in which we currently operate are members of the World Trade Organization, and most have committed to some deregulatory measures such as market competition and foreign ownership. Some countries now permit competition for all telecommunications facilities and services, while others allow less competition for some facilities and services, but restrict competition for other services. The telecommunications regulatory regimes of many Latin American countries are in the process of development. Many issues, such as regulation of incumbent providers, interconnection, unbundling of local loops, resale of telecommunications services, and pricing have not been addressed fully, or even at all. We cannot accurately predict whether and how these issues will be resolved, or their effect on our operations.

Below is a summary of certain of the regulations currently applicable to our Latin American operations, by country. The regulations apply equally to all of our operating entities in a given country.

Argentina

The regulatory framework of the Argentine telecommunications sector is changing. The Argentine telecommunications sector is subject to national Law "Argentina Digital" No. 27,078 of December 16, 2014 (the "ICT Law") which replaced (i) former Law No. 19,798 (the former Telecommunications Law), as amended, which had governed the operation of telecommunications companies in Argentina since August 1972; and (ii) Decree No. 764/2000, as amended, which opened the Argentine telecommunications market to competition in September 2000, established rules for the granting of licenses for telecommunications services, interconnection, the management and control of the radio spectrum and a Universal Service Fund regime.

The ICT Law established that Law No. 19,798 and Decree No. 764/2000, its supplementary laws and decrees, will remain in full force and effect as long as they do not contradict the ICT Law and until the regulatory authority enacts the required new supporting regulatory framework.

On January 4, 2016, a Necessity and Urgency Decree No. 267/2015 ("Decree 267") was published which basically: (i) partially amended the ICT Law; (ii) created a new control authority called the ENACOM (Ente Nacional de Comunicaciones) to replace the former authority (AFTIC), an entity under the jurisdiction of the Argentine Communications Ministry, that is in charge of the telecommunications and audiovisual communications industry; and (iii) created a special committee for the purpose of drafting a unified and updated new law that will replace the ICT Law (the "New ICT Law").

Most relevant aspects to our business (such as the licensing processes, USF regime, interconnection regime and spectrum regime) set forth under the former Law No. 19,798 and Decree No. 764/2000, and its supplementary laws, continue in full force until the enactment of the New ICT Law. The special committee created by Decree 267 is expected to submit a new a bill of the New ICT Law to Congress during 2017.

Brazil

Law No. 9,472, of 16 July 1997, known as the General Telecommunications Law ("LGT"), provides for the organization of telecommunications services in Brazil (which includes the regulation of the performance, provision and use of services, and the implementation and operation of telecommunications networks, as well as the use of orbit resources and radio-frequency spectrums) and creates the National Telecommunications Agency ("ANATEL"), the regulatory agency, which shall act independently, impartially, legally, impersonally and publicly.

ANATEL has generally pursued a policy of market liberalization and supported a competitive telecommunications environment. In order to foster effective competition and prohibit economic concentration in the market, the agency may establish restrictions, limits or conditions for companies, or groups of companies, regarding obtaining and transferring concessions, permits and authorizations to render telecommunications' services.

The convergence of services, the rapid changes in technology, the poor quality of telecommunication services being delivered to most of the population in the consumer market and the economic crisis in Brazil, among other factors, are leading ANATEL to consider a variety of changes to the current telecommunications regulation framework. During 2017, we expect several measures with significant changes in the regulatory model, thus promoting the unification of private and public regimes, a certain level of deregulation and quality of service obligations.

The Internet Civil Framework approved by Law 12.965/2014 provides for network neutrality and prohibits broadband providers from impairing or degrading (also known as throttling) Internet traffic to different Internet applications; prioritizing traffic or some content; or unreasonably interfering with or hindering the ability of users to access lawful content. The party responsible for the transmission, switching or routing has the duty to process, on an isonomic basis, any data packages, regardless of content, origin and destination, service, terminal or application and the legal discrimination or degradation of traffic, although still subject to further regulation, can only result from: (i) technical requirements essential to the adequate provision of services and applications; and (ii) prioritization of emergency services.

Chile

The telecommunications industry in Chile is regulated by the Undersecretariat of Telecommunications, a department under the Ministry of Transportation and Telecommunications.

In 1978, the National Policy on Telecommunications was issued which, in its most relevant aspects, called for the development of telecommunications services to be conducted by private institutions through authorizations granted by the government. However, it also endorsed a series of regulations aimed at establishing increased technical control over such investments and conferring certain discretionary powers upon the government. The policy was formalized through the General Law on Telecommunications approved in 1982, in which free, non-discriminatory access was granted to private firms in the development of the nation’s telecommunications services. This law established responsibilities with respect to telecommunication services, compulsory interconnection of facilities between public service licensees, and effectuated mandatory tariffing of services where existing market conditions were deemed insufficient to guarantee a free tariff system.

Chile amended its General Law on Telecommunications in 1985 to provide that concessions and permits may be granted without limit depending upon the quantity and type of service and geographic location. The law guarantees interconnection among telecommunications service concessionaires. Chile defines value added services as supplementary services. It is not necessary to have a telecommunications service license to offer supplementary services, although those who provide additional services must comply with the technical standards established by the Department of Telecommunications, and obtain authorization therefrom.

The General Law on Telecommunications has been amended on several occasions regarding such matters as network neutrality, the recent elimination of domestic long distance telephony, and full implementation of number portability, and establishing a national plan for critical telecommunications infrastructure to ensure continuity of services.

Colombia

The telecommunication industry in Colombia is subject to regulation by the Colombian Ministry of Communications. Since 1991, the Colombian Government has pursued a policy of liberalization and has encouraged joint ventures between public and private telecommunication companies to provide new and improved telecommunication services. In 2009, the Colombian government adopted a new regulatory regime (Law 1341, the “TIC law”) that was aimed at further deregulating the telecommunications market.

The telecommunication industry in Colombia is subject to regulation by the Communications Regulation Commission (CRC), the National Spectrum Agency (ANE) and the National Television Authority (ANTV).

The competition authority and consumer protection agency in Colombia is the Superintendence of Industry and Commerce (SIC), which is responsible for enforcing antitrust regulations, protecting consumers' rights and promoting competition in all economic sectors, including telecommunications.

The Ministry of Information and Communications Technologies ("ICT") is in charge of telecommunications policymaking, and the Minister is a member of the board of the regulatory bodies (CRC, ANTV and ANE).

The TIC Law created a new ICT register to facilitate market entry by telecommunications operators, as licenses were no longer tied to the provision of telecommunications services in Colombia. If services providers require spectrum the Ministry granted a spectrum use permit. During 2015, the CRC and the Ministry of Information and Communications Technologies ("MinICT") issued regulations and policies to promote and improve competition in the telecommunications sector in Colombia, relating to, among other things, customer contracts, reporting, interconnection charges in the mobile market and certain local accounting rules.

The Colombian government issued the National Development Plan (NDP), which is intended to increase competition and the use of information technology and communications in the country. The NDP contains provisions to allow for the efficient deployment of infrastructure and services.

The Colombian government is interested in joining the Organization for Economic Cooperation and Development, or OECD, and this will require the adoption of some reforms in the telecommunication sector, such as measures to ensure the independence of the regulatory authorities, eliminate concentration in fixed and mobile markets and remove barriers to network infrastructure deployment, which would not affect our business in Colombia.

Costa Rica

Costa Rica was the last country in Central America to liberalize the telecommunications market. Following ratification of the free trade agreement between the US and Central American States, in 2007, through the enactment of the General Telecommunications Law in 2008, and the appointment of the Telecommunications Superintendence ("SUTEL") as market regulator in 2009, Costa Rica consolidated the opening to competition of the telecommunications sector. SUTEL is an administrative body within the former Public Services Regulatory Authority (ARESEP) and as market regulator holds responsibilities such as: implementing policy and legislation, regulating the market entry by service providers and the services, imposing access and interconnection obligations, resolving intercarrier and unfair competition disputes, approving both retail tariffs (only if there are no effective competition conditions within the market) and adhesion contracts with end users, overseeing the universal service fund (FONATEL), and managing scarce resources, including numbers and radio spectrum. SUTEL also ensures compliance with consumer protections and promotes competition in the telecommunications sector.

The executive branch retains certain direct responsibilities in the telecom sector through the Ministry of Science, Technology and Telecommunications ("MICITT"), which is the main authority for the promotion and definition of national telecommunications policy, including the definition of a national plan for the development of telecommunications and granting spectrum licenses.

In 2014, SUTEL started to conduct market research on the prices of submarine cable access services in Costa Rica, to determine whether prices in that country are competitive in comparison with international prices. The final report on this research has not been released yet.

At the end of 2014, SUTEL announced that it expects to review the conditions for effective competition in the various telecommunications markets in Costa Rica (fixed, mobile, data, etc.), which could lead to the liberalization of the prices of telecommunication services in some markets or a review of new regulatory rulings to promote competition.

In October 2015, MICITT released the National Telecommunications Plan 2015-2021. The plan addresses the main objectives for the growth of the telecommunications sector until 2021 and the telecommunications market milestones. These objectives are mandatory both to MICITT and SUTEL regarding the spectrum procurement proceedings and the procurement proceedings financed through FONATEL.

Since 2015, there has also been an important reform process to the regulatory framework, implemented through the enactment of new regulations concerning subjects such as infrastructure sharing, quality of services, end user rights, pricing and tariffs, privacy of communications, universal access and services, among others.

Following a public consultation on the studies reviewing the conditions for competition in various telecommunications markets in Costa Rica, in December 2016, SUTEL declared effective competition in four of the telecommunications markets: International Telephony, Fixed Internet, International Roaming, and Telecommunications Transit. These markets thereon will no longer have a tariff regulation. The government determined that the Origination, Termination in individual fixed networks, Termination in individual mobile networks, and Fixed telephony markets do not present conditions for effective competition, and will therefore remain under tariff regulation. Lastly, SUTEL postponed the decision concerning the 'Mobile Telecommunications', 'Access and Origination in a Mobile Network', and 'Loop Unbundling' markets to the first quarter of 2017.

On December 2016, SUTEL also published the official invitation for the tendering of 70 MHz of spectrum in the 1800 MHz and 1900/2100 MHz bands, intended for the provision of mobile telephony and mobile internet services.

Ecuador

A Law of Telecommunications was enacted in February of 2015. As a result, the organizational structure of public entities in Ecuador will changed with the creation of the Agency for the Regulation and Control of Telecommunications ("ARCOTEL"), which will be responsible for the planning, regulation and control of telecommunications services as well as spectrum management.

The Ministry of Telecommunications will remain in charge of the development of information and communication technologies in Ecuador. It issues policies and general plans and monitors their implementation. The Ministry also evaluates, coordinates and promotes actions to ensure equal access to services and the effective and efficient use thereof.

Mexico

In June, 2013, the Mexican government performed an integral amendment of the regime, through the enactment of a Constitutional Decree. Such Decree included the modification of the Mexican Constitution and several legislative measures that have been requiring a series of further regulations amending the main regulatory framework of the telecommunications industry. Some of the most important aspects set forth in the amendment are the following: (i) the Federal Institution of Telecommunications ("IFT") was created as a constitutionally autonomous entity, replacing the existing Federal Telecommunications Commission ("COFETEL"), as the sole telecommunications regulatory body; and (ii) foreign investment was allowed with up to 100% in telecommunications and satellite communication services (previously capped at 49%) and up to 49% in broadcasting services (previously prohibited).

A telecommunications law was approved by the Federal Congress of Mexico and became effective on August 13, 2014.

The telecommunications sector in Mexico is regulated primarily by the IFT. Among other aspects, the IFT regulates the requirements for licensing public telecommunications networks, and the obligations of telecommunication companies in Mexico. Further, it manages licensing requirements for radioelectric spectrum, satellite geostationary orbits assigned to Mexico and its related spectrum, makes declarations of preponderant agents in the telecommunications and broadcasting sectors (more than 50% of the users, subscribers, audience, network traffic or used network capacity, measured on a national basis), analyzes the divestiture and restructuring plans submitted by Preponderant agents to reconsider their status and authorizations to commercialize telecommunications services.

Under the new telecommunications law, the provision of value-added services has been deregulated. Also, there is a new concession-granting regime, which establishes a unique concession for the provision of all telecommunication services. The unique concession may be granted by the IFT only to Mexican individuals or companies, but there will be no limitation on foreign investment. However, the concessions granted before the new law was enacted, will remain valid until they expire or the operator decides to apply for a master concession (transition regime).

On March 6 2014, the IFT declared America Movil SAB de CV, Telefonos de Mexico SAB de CV, and Grupo Carso, among other companies, to be preponderant agents in the telecommunications sector, and Grupo Televisa, among others, to be a preponderant agent in the open broadcast television sector. The divestiture plan submitted by America Movil is pending approval.

The IFT may impose additional asymmetric regulations and specific obligations upon preponderant agents such as rates, quality, shared-use of infrastructure, rights of way and disaggregation of the local telecommunication network.

Some important regulatory measures were issued by the IFT in 2015: (i) the application of no charge for the interconnection with networks of the preponderant agents and (ii) the modification of tariffs for national long distances telephony services due to the Mexican territory treatment as a local area.

While the IFT provides the main regulatory framework of the telecommunications industry, other relevant laws in the field are the Federal Antitrust Law, the Foreign Investment Law, the Law of Protection of Personal Information in Possession of Private Entities, and the Federal Consumers Protection Law, all of which play a part in the overall regulation of the sector, in addition to the general commerce and contractual laws. The above mentioned laws also shall be adjusted to the new telecommunication law.

The enactment of the new law and the initial measures taken by the IFT in 2014 have increased the dynamism of the Mexican telecommunications market, in which the main players are moving faster and new players are emerging.

In 2016 the IFT issued the Guidelines for Collaboration with Justice which came into force on January 1, 2016, and brought about several new obligations for the telecommunications concessionaires and authorization holders. However, the implementation of such Guidelines is still not completely clear, as the IFT’s criterion is that every concessionaire and authorization holder is responsible for complying with the Guidelines, even when its technical and operative capabilities do not allow them to gather the information required by the Guidelines.

Panama

In Panama the telecommunications market was privatized in 1997 and deregulated in 2003, and services have seen strong growth since that time. Due to the comparative advantages of the geographical location of Panama there is a significant supply of subsea connections.

The telecommunications industry in Panama is regulated by Autoridad Nacional de los Servicios Públicos or ASEP (formerly Ente Regulador de los Servicios Públicos), an independent regulatory body. ASEP is a multi-sector regulator in charge of all Panama utilities including telecommunications.

Peru

The telecommunications industry in Peru is regulated by the Supervisory Authority for Private Investment in Telecommunications (“OSIPTEL”) and the Ministry of Transportation and Communications (“MTC”). OSIPTEL is an independent regulatory body attached to the Office of the President of the Council of Ministers.

Under Peruvian law, the provision of public telecommunications services requires a concession. The functions related to the issuance of concessions and market access registration and the assignment of the radio spectrum for public telecommunications services are managed by the MTC’s General Directorate of Concessions in Telecommunications. Since market liberalization became effective in August 1998, there has been no limitation on the issuance of concessions, except for services subject to natural limitations on grounds of scarce resources, as in the case of the radio spectrum.

During 2014, the National Congress submitted a General Telecommunication Bill which would modify the existing general regulatory regime. The bill remains under debate and has not yet been passed.

Uruguay

The telecom market in Uruguay is highly regulated. The Executive Branch, through the Ministry of Industry, Energy and Mining, is the final authority in regards with telecom matters, while the Telecom National Office (Dirección Nacional de Telecomunicaciones) works as a general advisory body and the Communication Services Regulatory Unit URSEC (Unidad Reguladora de Servicios de Comunicaciones) participates as a regulatory agency.

To provide telecommunications services, it is necessary to hold a license. Moreover, if the service also requires the assignment of spectrum, it is also necessary to have a concession. The Executive Branch grants licenses to broadcast and also grants assignments of spectrum with a fixed term. URSEC is entitled to grant licenses and concessions in all the remaining cases. The international long distance telephony is a closed market with approximately ten players operating in that market. Through our Uruguayan branch, we are licensed for data transmission services and as an international long distance service provider.

Venezuela

The Venezuelan telecommunications industry is regulated by the *Comisión Nacional de Telecomunicaciones* (“CONATEL of Venezuela”), which is ascribed to and under the purview of the Minister of People’s Power for Communication and Information. Venezuela opened its telecommunications market to competition on November 28, 2000. In 2007, the Venezuelan government nationalized the incumbent telecommunications operator, CANTV. In December 2010, the government issued a new law declaring that the provision of telecommunications services is an activity of the “public domain.” To date, the government has not indicated its intent to expand nationalization within the telecommunications sector.

The Venezuelan government restricts the setting of fees for telecommunication services, limiting the ability of service providers to adjust their fees in response to Venezuela’s high inflation rate

Asian Regulation

The status of liberalization of the telecommunications regulatory regimes of the Asian countries in which we operate or may in the future operate varies. Some countries allow full competition in the telecommunications sector, while others limit competition for many or most services. Similarly, some countries in Asia maintain foreign ownership restrictions which limit the amount of foreign direct investment and require foreign companies to seek local joint venture partners.

Most of the countries in the region have committed to liberalizing their telecommunications regimes and opening their telecommunications markets to foreign investment as part of the World Trade Organization Agreement on Basic Telecommunications Services, which came into force in 1998. Additionally, the United States has entered into bilateral Free Trade Agreements with Singapore, Australia and South Korea that became effective in 2003, 2005 and 2012, respectively, and a Trans-Pacific Partnership agreement with Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam that was concluded in 2015. We cannot predict what effect, if any, these agreements will have on other countries in the region or whether the U.S. will pursue similar agreements with other countries. We also cannot be certain whether this liberalizing trend will continue or accurately predict the pace and scope of liberalization. It is possible that one or more of the countries in which we operate or may in the future operate will slow or halt the liberalization of its telecommunications markets. The effect on us of such an action cannot be accurately predicted.

The telecommunications regulatory regimes of many Asian countries are in the process of development. Many issues, such as regulation of incumbent providers, interconnection, unbundling of local loops, resale of telecommunications services, offering of voice services and pricing have not been addressed fully or at all. We cannot accurately predict whether or how these issues will be resolved and their effect on our operations in Asia.

Glossary of Terms

access	Telecommunications services that permit long distance carriers to use local exchange facilities to originate and/or terminate long distance service.
access charges	The fees paid by long distance carriers to LECs for originating and terminating long distance calls on the LECs' local networks.
ATM	Asynchronous transfer mode. An information transfer standard that is one of a general class of packet technologies that relay traffic by way of an address cell. The ATM format can be used by many different information systems, including LANs, to deliver traffic at varying rates, permitting a mix of data, voice and video.
backbone	A high-speed network that interconnects smaller, independent networks. It is the through-portion of a transmission network, as opposed to spurs which branch off the through-portions
CAP	Competitive Access Provider. A company that provides its customers with an alternative to the local exchange company for local transport of private line and special access telecommunications services.
caching	A process by which a Web storage device or cache is located between Web servers (or origin servers) and a user, and watches requests for HTML pages and objects such as images, audio, and video, then saves a copy for itself. If there is another request for the same object, the cache will use its copy, instead of asking the origin server for it again.
capacity	The information carrying ability of a communications facility.
carrier	A provider of communications transmission services by fiber, wire or radio.

CDN	Content Distribution Network or CDN describes a system of computers networked together across the Internet that cooperate transparently to deliver various types of content to end users. The delivery process is optimized generally for either performance or cost. When optimizing for performance, locations that can serve content quickly to the user are chosen. When optimizing for cost, locations that are less expensive to serve from may be chosen instead.
central office	Telephone company facility where subscribers' lines are joined to switching equipment for connecting other subscribers to each other, locally and long distance.
CLEC	Competitive Local Exchange Carrier. A company that competes with ILECs in the local services market.
co-carrier	A relationship between a CLEC and an ILEC that affords each company the same access to and right on the other's network and provides access and services on an equal basis.
common carrier	A government defined group of private companies offering telecommunications services or facilities to the general public on a non-discriminatory basis.
conduit	A pipe, usually made of metal, ceramic or plastic, that protects buried cables.
dark fiber	Fiber optic strands that are not connected to transmission equipment.
dedicated lines	Telecommunications lines reserved for use by particular customers.
facilities based carriers	Carriers that own and operate their own network and equipment.
fiber optics	A technology in which light is used to transport information from one point to another. Fiber optic cables are thin filaments of glass through which light beams are transmitted over long distances carrying enormous amounts of data. Modulating light on thin strands of glass produces major benefits including high bandwidth, relatively low cost, low power consumption, small space needs and total insensitivity to electromagnetic interference.
Gateway	Gateways are the primary technical facilities in the markets we serve. They are the endpoints of each long haul city-pair segment. Where we have metro rings, they are the locations most metro rings home to.
Gbps	Gigabits per second. A transmission rate. One gigabit equals 1.024 billion bits of information.
ISDN	Integrated Services Digital Network. An information transfer standard for transmitting digital voice and data over telephone lines at speeds up to 128 Kbps.
ILEC	Incumbent Local Exchange Carrier. A company historically providing local telephone service. Often refers to one of the Regional Bell Operating Companies (RBOCs). Often referred to as "LEC" (Local Exchange Carrier).
Interconnection	Interconnection of facilities between or among the networks of carriers, including potential physical colocation of one carrier's equipment in the other carrier's premises to facilitate such interconnection.
ISPs	Internet Service Providers. Companies formed to provide access to the Internet to consumers and business customers via local networks.
IXC	Interexchange Carrier. A telecommunications company that provides telecommunications services between local exchanges on an interstate or intrastate basis.
Kbps	Kilobits per second. A transmission rate. One kilobit equals 1,024 bits of information.
LATA	Local Access and Transport Area. A geographic area composed of contiguous local exchanges, usually but not always within a single state. There are approximately 200 LATAs in the United States.

leased line	An amount of telecommunications capacity dedicated to a particular customer along predetermined routes.
LEC	Local Exchange Carrier. A telecommunications company that provides telecommunications services in a geographic area. LECs include both ILECs and CLECs.
local exchange	A geographic area determined by the appropriate state regulatory authority in which calls generally are transmitted without toll charges to the calling or called party.
local loop	A circuit that connects an end user to the LEC central office within a LATA.
long distance carriers	Long distance carriers provide services between local exchanges on an interstate or intrastate basis. A long distance carrier may offer services over its own or another carrier’s facilities.
Mbps	Megabits per second. A transmission rate. One megabit equals 1.024 million bits of information.
MPLS	MultiProtocol Label Switching. A standards approved technology for speeding up network traffic flow and making it easier to manage. MPLS involves setting up a specific path for a given sequence of packets, identified by a label put in each packet, thus saving the time needed for a router or switch to look up the address to the next node to forward the packet to.
multiplexing	An electronic or optical process that combines a large number of lower speed transmission lines into one high speed line by splitting the total available bandwidth into narrower bands (frequency division), or by allotting a common channel to several different transmitting devices, one at a time in sequence (time division).
PBX	Private Branch eXchange. A PBX, sometimes known as a phone switch or phone switching device, is a device that connects office telephones in a business with the PSTN. The functions of a PBX include routing incoming calls to the appropriate extension in an office, sharing phone lines between extensions, automated greetings for callers using recorded messages, dialing menus, connections to voicemail, automatic call distribution and teleconferencing.
peering	The commercial practice under which ISPs exchange traffic with each other. Although ISPs are free to make a private commercial arrangement, there are generally two types of peering. With a settlement free peering arrangement the ISPs do not need to pay each other for the exchange of traffic. With paid peering, the larger ISP receives payment from the smaller ISP to carry the traffic of that smaller ISP. Peering occurs at both public and private exchange points.
POP	Point of Presence. Telecommunications facility where a communications provider locates network equipment used to connect customers to its network backbone.
private line	A dedicated telecommunications connection between end user locations.
PSTN	Public Switched Telephone Network. That portion of a local exchange company’s network available to all users generally on a shared basis (i.e., not dedicated to a particular user). Traffic along the public switched network is generally switched at the local exchange company’s central offices.
RBOCs	Regional Bell Operating Companies. Originally, the seven local telephone companies established as a result of the divestitures of AT&T in connection with its settlement with the U.S. Department of Justice of an antitrust lawsuit.
reciprocal compensation	The compensation of a CLEC for termination of a local call by the ILEC on the CLEC’s network, which is the same as the compensation that the CLEC pays the ILEC for termination of local calls on the ILEC’s network.
resale	Resale by a provider of telecommunications services (such as a LEC) of such services to other providers or carriers on a wholesale or a retail basis.

router	Equipment placed between networks that relays data to those networks based upon a destination address contained in the data packets being routed.
selective router	Telephone switch or functional equivalent, controlled by the relevant local exchange carrier (LEC), which determines the public safety answering point to which a 911 call should be delivered based on the location of the 911 caller.
SONET	Synchronous Optical Network. An electronics and network architecture for variable bandwidth products which enables transmission of voice, data and video (multimedia) at very high speeds. SONET ring architecture provides for virtually instantaneous restoration of service in the event of a fiber cut or equipment failure by automatically rerouting traffic in the opposite direction around the ring.
special access services	The lease of private, dedicated telecommunications lines or “circuits” along the network of a local exchange company or a CAP, which lines or circuits run to or from the long distance carrier POPs. Examples of special access services are telecommunications lines running between POPs of a single long distance carrier, from one long distance carrier POP to the POP of another long distance carrier or from an end user to a long distance carrier POP.
streaming	Streaming is the delivery of media, such as movies and live presentations, over a network in real time. A computer (a streaming server) sends the media to another computer (a client computer), which plays the media as it is delivered.
switch	A device that selects the paths or circuits to be used for transmission of information and establishes a connection. Switching is the process of interconnecting circuits to form a transmission path between users and it also captures information for billing purposes.
Tbps	Terabits per second. A transmission rate. One terabit equals 1.024 trillion bits of information.
TDM	Time Division Multiplexing. A technology that transmits multiple signals simultaneously over a single transmission path.
unbundled	Services, programs, software and training sold separately from the hardware.
unbundled access	Access to unbundled elements of a telecommunications services provider’s network including network facilities, equipment, features, functions and capabilities, at any technically feasible point within such network.
VoIP	Voice over Internet Protocol.

ITEM 1A. RISK FACTORS

Forward Looking Statements

We, or our representatives, occasionally may make or may have made certain forward-looking statements, either orally or in writing, including without limitation statements made or to be made in this Form 10-K, our quarterly reports on Form 10-Q, information in other filings with the SEC, press releases and other public documents or statements. In addition, our representatives, occasionally, participate in speeches and calls with market analysts, conferences with investors or potential investors in our securities and other meetings and conferences. Some of the information presented at these speeches, calls, meetings and conferences may include forward-looking statements. We use words like “plan,” “estimate,” “expect,” “anticipate,” “believe,” “intend,” “goal,” “seek,” “project,” “strategy,” “future,” “likely,” “may,” “should,” “will” and similar references to future periods to identify forward-looking statements.

We wish to ensure that all forward-looking statements are accompanied by meaningful cautionary statements, to ensure to the fullest extent possible the protections of the safe harbor established in the U.S. Private Securities Litigation Reform Act of 1995. Accordingly, all forward-looking statements are qualified in their entirety by reference to, and are accompanied by, this discussion of certain important factors that could cause actual results to differ materially from those projected in these forward-looking statements. We caution the reader that this list of important factors may not be exhaustive. We operate in a rapidly changing business, and new risk factors emerge from time to time.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations, and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. We cannot predict every risk factor, nor can we assess the effect, if any, of all such risk factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those projected in any forward-looking statements. Accordingly, forward-looking statements should not be relied upon as a prediction of actual results. Further, we undertake no obligation to update forward-looking statements that may be made occasionally, whether because of new information, future developments or otherwise, after the date they are made to conform the statements to actual results or changes in our expectations.

For more information about our results of operations and financial condition, see the discussion under Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” appearing later in this Form 10-K.

Risks Related to our Pending Merger with CenturyLink

Our pending merger with CenturyLink may cause disruption to our business.

On October 31, 2016, we entered into an agreement and plan of merger with CenturyLink, pursuant to which we will, subject to the satisfaction or waiver of the stated closing conditions, merge with a wholly owned subsidiary of CenturyLink in a stock-and-cash transaction. The merger agreement generally requires us to operate our business in the ordinary course pending consummation of the proposed merger and restricts us, without CenturyLink’s consent, from taking certain specified actions until the merger is completed. These restrictions may affect our ability to execute our business strategies and attain our financial and other goals and may affect our financial condition, results of operations and cash flows. The pursuit of the merger and the preparation for the integration of our business with CenturyLink’s business may place a significant burden on management and internal resources. The diversion of management’s attention away from day-to-day business concerns could adversely affect our financial results.

We are also subject to litigation related to the CenturyLink merger, which may result in significant costs and expenses. In addition to potential litigation-related expenses, we have incurred and will continue to incur other significant costs, expenses and fees for professional services and other transaction costs in connection with the CenturyLink merger, and many of these fees and costs are payable regardless of whether or not the CenturyLink merger is consummated.

Uncertainty regarding the completion of the CenturyLink merger may cause customers to delay or defer decisions concerning us and may adversely affect our ability to attract and retain key employees.

The CenturyLink merger will be consummated only if stated conditions are met, including, among others, the approval and adoption of the Merger Agreement and approval of the merger by our stockholders, the approval of CenturyLink’s proposed stock issuance in connection with the CenturyLink merger by CenturyLink’s shareholders and the receipt of regulatory approvals. Many of the conditions are beyond our control. As a result, there may be uncertainty regarding the completion of the CenturyLink merger. This uncertainty, along with potential customer uncertainty regarding the service to be provided by the combined company following the CenturyLink merger, may cause customers to delay or defer decisions concerning purchases from us or affect our customer retention initiatives, which could negatively affect our revenue, earnings and cash flow, regardless of whether the CenturyLink merger is ultimately completed.

Uncertainty regarding the completion of the CenturyLink merger may also foster uncertainty among employees about their future roles. Key employees may depart because of issues relating to the uncertainty and difficulty of integration or desire not to remain with the combined company following the combination. This may adversely affect our ability to attract and retain key management, sales, marketing, operational and technical personnel, which could have an adverse effect on our ability to generate revenue at anticipated levels prior to the completion of the CenturyLink merger.

Our pending merger with CenturyLink is subject to conditions, including certain conditions that may not be satisfied, and may not be completed on a timely basis, or at all. Failure to complete the CenturyLink merger and the transactions contemplated thereby could have material and adverse effects on us.

The completion of our pending merger with CenturyLink is subject to a number of conditions, including the receipt of required regulatory approvals, the approval and adoption of the Merger Agreement and the approval of the CenturyLink merger by our stockholders, and the approval of CenturyLink's stock issuance in connection with the CenturyLink merger by CenturyLink's shareholders, which make the completion and timing of the completion of the CenturyLink merger uncertain. Also, either we or CenturyLink may terminate the Merger Agreement if the CenturyLink merger has not been completed by October 31, 2017 (subject to extension to January 31, 2018 under certain circumstances) unless the failure of the CenturyLink merger to be completed has resulted from the failure of the party seeking to terminate the Merger Agreement to perform its obligations.

If the CenturyLink merger is not completed on a timely basis, or at all, our ongoing business may be adversely affected. Additionally, in the event the CenturyLink merger is not completed, we will be subject to a number of risks without realizing any of the benefits of having completed the CenturyLink merger, including the following:

- We may be required to pay to CenturyLink a termination fee of $737.5 million (less any previously reimbursed expenses), and in some cases, expenses of CenturyLink up to $75 million if the CenturyLink merger is terminated under qualifying circumstances, as described in the Merger Agreement;

- We will be required, subject to certain exceptions, to pay our costs relating to the CenturyLink merger, such as financial advisor, legal, accounting and printing fees, whether or not the CenturyLink merger is completed;

- Time and resources committed by management to matters relating to the CenturyLink merger (including integration planning) could otherwise have been devoted to pursuing other beneficial opportunities;

- The market price of our common stock could decline to the extent that the current market price reflects a market assumption that the CenturyLink merger will be completed; and

- If the Merger Agreement is terminated and our Board of Directors subsequently seeks another business combination, our stockholders cannot be certain that we will be able to find a party willing to enter into a merger agreement on terms equivalent to or more attractive than the terms that CenturyLink has agreed to in the CenturyLink merger.

The merger agreement contains provisions that could discourage a potential competing acquirer.

The merger agreement contains "no shop" provisions that, subject to limited exceptions, restrict our ability to solicit, initiate, or knowingly encourage and facilitate competing third-party proposals for the acquisition of our stock or assets. In addition, before our board of directors withdraws, qualifies or modifies its recommendation of the proposed merger with CenturyLink or terminates the merger agreement to enter into a third-party acquisition proposal, CenturyLink generally has an opportunity to offer to modify the terms of the proposed merger. In some circumstances, upon termination of the merger agreement, we will be required to pay a termination fee of $737.5 million . These provisions could discourage a potential third-party acquirer that might have an interest in acquiring all or a significant portion of us from considering or proposing that acquisition, even if it were prepared to pay consideration with a higher per share cash or market value than the market value proposed to be received or realized in the merger, or might otherwise result in a potential third-party acquirer proposing to pay a lower price to our stockholders than it might otherwise have proposed to pay because of the added expense of the termination fee that may become payable in certain circumstances.

Risks Related to our Business Operations

We need to increase Core Network Services revenue from the services we offer to realize our targets for financial and operating performance.

We must increase Core Network Services revenue at acceptable margins to realize our targets for financial and operating performance, including free cash flow. If:

- we do not avoid excessive customer churn or improve our current relationships with existing key customers;
- we cannot expand the available capacity on our network to meet our customers' demands promptly; or
- our customers determine to obtain these services from either their own network or from one of our competitors,

we may not increase or maintain either or both of our Core Network Services revenue at acceptable margins and free cash flow, which would adversely affect our ability to become and/or remain profitable.

Our business requires the continued development of effective business support systems and uniform standards, controls and policies to implement customer orders and to provide and bill for services.

Our business depends on our ability to continue to develop and manage effective business support systems. In certain cases, developing these business support systems is required to realize anticipated benefits from both past and future acquisitions. The development and management of business support systems is a complicated undertaking requiring significant resources and expertise, developing uniform standards, controls, procedures and policies and the efficient consolidation and elimination of business support systems that are no longer useful in the business. This undertaking also requires support from third-party vendors. Following the development of the business support systems, the data migration regarding network and circuit inventory must be completed for the full benefit of the systems to be realized. Business support systems are needed for:

- quoting, accepting and inputting customer orders for services;
- provisioning, installing and delivering services;

- providing customers with direct access to our information systems so they can manage the services they purchase from us, generally through web-based customer portals; and

- billing for services.

Because our business provides for continued rapid growth in the number of customers we serve, the volume of services offered and the integration of any acquired companies' business support systems, there is a need to continually develop our business support systems on a schedule sufficient to meet proposed milestone dates. Failing to continue to develop effective unified business support systems or complete the data migration regarding network and circuit inventory into these systems could materially adversely affect our ability to implement our business plans and realize anticipated benefits from our acquisitions.

We may lose customers if we experience system failures that significantly disrupt the availability and quality of the services we provide. System failures may also cause interruptions to service delivery and the completion of other corporate functions.

Our operations depend on our ability to limit and mitigate interruptions or degradation in service for customers. Interruptions in service or performance problems for whatever reason, including integration related activities, could undermine confidence in our services and cause us to lose customers or make it more difficult to attract new ones. In addition, because many of our services are critical to the businesses of many of our customers, any significant interruption or degradation in service could cause lost profits or other losses to customers. Although we generally limit our liability for service failures in our service agreements to limited service credits (generally in the form of free service for a short period of time) and generally exclude any liability for "consequential" damages such as lost profits, a court might not enforce these limitations on liability in the manner contemplated, which could expose us to financial loss. In addition, we often provide our customers with committed service levels. If we cannot meet these service level commitments, we may have to provide service credits or other compensation to our customers. Because we offer emergency notification services called "911" services, any significant interruption or degradation in those services could create legal and financial exposure.

The failure of any equipment or facility on our network, including our network operations control centers and network data storage locations, could cause the interruption of customer service and other corporate functions until necessary repairs are effected or replacement equipment is installed. In addition, our business continuity plans may not be adequate to address a particular failure we experience. Delays, errors, network equipment or network facility failures, including with respect to our network operations control centers and network data storage locations, could also result from natural disasters (including natural disasters that may increase in frequency because of the effects of climate change), disease, accidents, terrorist acts, power losses, security breaches, vandalism or other illegal acts, computer viruses, or other causes. Our business could be significantly hurt from these delays, errors, failures or faults including as a result of:

- service interruptions;

- exposure to customer liability;

- the inability to install new service;

- the unavailability of employees necessary to provide services;

- the delay in completing other corporate functions such as issuing bills and preparing financial statements; or
- the need for expensive modifications to our systems and infrastructure.

We have only recently generated net income for our three most recent full fiscal years and have generated substantial net losses in the past.

While we had net income of $677 million and $3.433 billion (which included a $3.3 billion income tax benefit due to the release of a valuation allowance against U.S. federal and state deferred tax assets) and $ 314 million for the year ended December 31, 2016 , 2015 and 2014 , respectively, we generated net losses of approximately $109 million and $422 million for the years ended December 31, 2013 and 2012, respectively. Although we anticipate that our operating results will continue to improve over time, there can be no assurance that the recent level of operating results and profitability will continue and that anticipated future operating improvements will be realized on schedule or that we can sustain profitability in the future. If we would incur net losses in the future they could limit our ability to fund expansions of our network, investments in our products and services, interest and principal payments on our debt, or other business needs.

If our security measures are breached, or if our services are subject to attacks that degrade or deny the ability of users to access our systems, products and services, we may experience significant legal and financial exposure, our products and services may be perceived as not being secure, users and customers may curtail or stop using our products and services, and our business may be disrupted.

Network and information systems and other technologies are critical to our business activities. Network and information systems-related events such as computer hackings, cyber-attacks, computer viruses, worms or other destructive or disruptive software, process breakdowns, denial of service attacks or other malicious activities, or any combination of the these items, could cause a degradation or disruption of our services, damage to our properties, equipment and data, or unauthorized disclosure of confidential information. We experience cyber-attacks against our network and information systems of varying degrees regularly, and as a result, unauthorized parties could obtain access to our data or our customers' data. Our security measures may also be breached due to employee error, malfeasance, or otherwise. And outside parties may attempt to fraudulently induce our employees or customers to disclose sensitive information to gain access to our data or our customers' data, including information subject to data protection laws and regulations both in the United States and elsewhere governing personally identifiable information, protected health information and Customer Proprietary Network Information. The risk of these systems-related events and security breaches occurring has intensified, in part because we maintain certain information necessary to conduct our businesses in digital form stored on servers connected to the Internet.

While we develop and maintain systems and processes designed to prevent systems-related events and security breaches from occurring, the development and maintenance of these systems and processes is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures become more sophisticated. Despite our efforts, there can be no assurance that unauthorized access and security breaches will not occur in the future. In addition, because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, we may not anticipate these techniques or to implement adequate preventive measures.

Any security breach or unauthorized access could cause significant legal and financial exposure, including regarding customer credits, lost revenue due to business interruption, increased expenditures on security measures, monetary damages, regulatory enforcement actions, fines and/or criminal prosecution. In addition, damage to our reputation and the market perception of the effectiveness of our security measures could cause us to lose customers. Moreover, the amount and scope of insurance we maintain against losses resulting from unauthorized access or security breaches may not be sufficient to cover our losses or otherwise adequately compensate us for any disruptions to our businesses that may result.

Failure to develop and introduce new services could affect our ability to compete in the industry.

We continuously develop, test and introduce new services delivered over our communications network. These new services are intended to allow us to address new segments of the communications marketplace, address the changing communications needs of our existing customers and compete for additional customers.

In certain instances, introducing new services requires the successful development of new technology. If upgrades of existing technology are required for introducing new services, the success of these upgrades may depend on reaching mutually acceptable terms with vendors and on vendors meeting their obligations promptly.

In addition, new service offerings may not be widely accepted by our customers. If our new service offerings are not widely accepted by our customers, we may terminate those service offerings and we may be required to impair any assets or technology used to develop or offer those services.

If we cannot complete the development and introduction of new services promptly, our business could be materially adversely affected.

Our future results will suffer if we do not effectively manage expansions to our operations.

We may continue to expand our operations through new product and service offerings and through additional strategic investments, acquisitions or joint ventures, some of which may involve complex technical and operational challenges. Our future success depends, in part, upon our ability to manage our expansion opportunities, which pose numerous risks and uncertainties, including the need to integrate new operations into our existing business in an efficient and timely manner, to combine accounting and data processing systems and management controls and to integrate relationships with customers, vendors and business partners. In addition, future acquisitions or joint ventures may involve the issuance of additional shares of our common stock, which may dilute our stockholders' ownership.

Any future acquisitions of businesses or facilities could entail several risks, including:

- problems with effectively integrating operations;
- inability to maintain key pre-acquisition business relationships;
- increased operating costs;
- exposure to unanticipated liabilities; and
- difficulties in realizing projected efficiencies, synergies and cost savings.

We continually evaluate potential investments and strategic opportunities to expand, enhance connectivity and add traffic to our network. In the future, we may seek additional investments, strategic alliances or similar arrangements, which may expose us to risks such as:

- the difficulty of identifying appropriate investments, strategic allies or opportunities on terms acceptable to us;
- the possibility that senior management may have to spend considerable time negotiating agreements and monitoring these arrangements;
- potential regulatory issues applicable to the telecommunications industry;
- the loss or reduction in value of the capital investment;
- our inability to capitalize on the opportunities presented by these arrangements; and
- the possibility of insolvency of a strategic ally.

We cannot be certain that our future expansion or acquisition opportunities will succeed, or that we will realize expected operating efficiencies, cost savings, revenue enhancements, synergies or other benefits.

Our future growth depends upon the continued development and expansion of the Internet as a communications medium and marketplace for the distribution and consumption of data and video by businesses, consumers and governments.

Achieving the anticipated benefits of our business operations will depend in part upon the continued development and expansion of the Internet as a communications medium and marketplace for the distribution and consumption of data and video by businesses, consumers and governments. Using the Internet for these purposes may not grow and expand at the rate we anticipate or may be restricted by such things as:

- actions by ISPs or the owners of access networks that restrict us from delivering our customers' traffic to the users of those networks;
- future regulation;
- a lack of anticipated technology innovation and adoption; or
- a lack of continued broadband penetration both in the United States and elsewhere.

Intellectual property and proprietary rights of others could prevent us from using necessary technology to provide our services or subject us to expensive intellectual property litigation.

If technology necessary for us to provide our services was determined by a court to infringe a patent held by another entity that is unwilling to grant us a license on terms acceptable to us, we could be precluded by a court order from using that technology and we would likely be required to pay a significant monetary damages award to the patent holder. The successful enforcement of these patents, or our inability to negotiate a license for these patents on acceptable terms, could force us to cease using the relevant technology and offering services incorporating the technology. If a claim of infringement was brought against us based on the use of our technology or against our customers based on their use of our services for which we must indemnify, we could be subject to litigation to determine whether such use or sale is, in fact, infringing. This litigation could be expensive and distracting, regardless of the outcome.

While our own patent portfolio may deter other operating companies from bringing such actions, patent infringement claims are increasingly being asserted by patent holding companies, which do not use technology and whose sole business is to enforce patents against operators, such as us, for monetary gain. Because such patent holding companies do not provide services or use technology, the assertion of our own patents by way of counterclaim would be largely ineffective. We have already been the subject of time-consuming and expensive patent litigation brought by certain patent holding companies and we can reasonably expect that we will face further claims in the future.

Continued uncertainty in the global financial markets and the global economy may negatively affect our financial results.

Continued uncertainty in the global financial markets and economy may negatively affect our financial results. A prolonged period of economic decline could have a material adverse effect on our results of operations and financial condition and exacerbate some of the other risk factors we describe herein. Our operating results and financial condition could be negatively affected if, because of economic conditions:

- customers cancel, defer or forgo purchases of our services;
- customers cannot make timely payments to us;
- the demand for, and prices of, our services are reduced because of actions by our competitors or otherwise;
- key suppliers upon which we rely are unwilling or unable to provide us with the materials we need for our network on a timely basis or on terms we find acceptable; or
- our financial counterparties, insurance providers or other contractual counterparties cannot, or do not meet, their contractual commitments to us.

Future expansion or adaptation of our network will require substantial resources, which may not be available at the time.

We will need to continue to expand and adapt our network to remain competitive, which may require significant additional funding. Additional expansion and adaptations of our communications network's electronic and software components will be necessary to respond to:

- growing number of customers;
- the development and launching of new services;
- increased demands by customers to transmit larger amounts of data;
- changes in customers' service requirements;
- technological advances by competitors; and
- governmental regulations.

Future expansion or adaptation of our network will require substantial additional financial, operational and managerial resources, which may not be available at the time. We may be unable to expand or adapt our network to respond to these developments on a timely basis and at a commercially reasonable cost.

The market prices for many of our services have decreased in the past and may decrease in the future, resulting in lower revenue and margins than we anticipate.

Over the past few years, the market prices for many of our services have decreased. These decreases resulted from downward market pressure and other factors including:

- technological changes and network expansions which have resulted in increased transmission capacity available for sale by us and by our competitors;
- some of our customer agreements contain volume based pricing; and
- some of our competitors have been willing to accept smaller operating margins in the short term in an attempt to increase long-term revenue.

To retain customers and revenue, we often must reduce prices in response to market conditions and trends. As our prices for some of our services decrease, our operating results may suffer unless we can either reduce our operating expenses or increase traffic volume from which we can derive additional revenue.

The need to obtain additional capacity for our network from other providers increases our costs. In addition, the need to interconnect our network to networks controlled by others could increase our costs.

We use network resources owned by other companies for portions of our network. We obtain the right to use such network portions, including both telecommunications capacity and rights to use dark fiber, through operating leases and IRU agreements. In several of those agreements, the counter party is responsible for network maintenance and repair. If a counter party to a lease or IRU suffers financial distress or bankruptcy, we may not be able to enforce our rights to use these network assets or, even if we could continue to use these network assets, we could incur material expenses related to maintenance and repair. We could also incur material expenses if we had to locate alternative network assets. We may not succeed in obtaining reasonable alternative network assets if needed. Failure to obtain usage of alternative network assets, if necessary, could have a material adverse effect on our ability to carry on business operations. In addition, some of our agreements with other providers require the payment of amounts for services whether or not those services are used.

In the normal course of business, we must enter into interconnection agreements, including IP interconnection for voice and data services, with many domestic and foreign local telephone companies and the owners of networks that our customers desire to access to deliver their services. We are not always able to secure these interconnection agreements on favorable terms.

Costs of obtaining service from other communications carriers comprise a significant proportion of the operating expenses of long distance carriers. Similarly, a large proportion of the costs of providing international service consists of payments to other carriers. Changes in regulation, particularly the regulation of local and international telecommunication carriers and local access network owners, could indirectly, but significantly, affect our competitive position. These changes could increase or decrease the costs of providing our services.

Our operations are subject to regulation in each country in which we operate and require us to obtain and maintain several governmental licenses and permits. If we violate those regulatory requirements or to obtain and maintain those licenses and permits, including payment of related fees, if any, we may not be able to conduct our business in that jurisdiction. Moreover, those regulatory requirements could change in a manner that significantly increases our costs or otherwise adversely affects our operations.

In the ordinary course of constructing our networks and providing our services, we must obtain and maintain a variety of telecommunications and other licenses and authorizations in the countries in which we operate, and rights-of-way from utilities, railroads, incumbent carriers and other persons. We also must comply with a variety of regulatory obligations. Due to the political and economic risks associated with the countries in which we operate, there can be no assurance we can maintain our licenses or that they will be renewed upon their expiration. Our failure to obtain or maintain necessary licenses, authorizations and rights-of-way, or to comply with the obligations imposed upon license holders including the payment of fees, in one or more countries, may cause sanctions or additional costs, including the revocation of authority to provide services in one or more countries.

In addition, our subsidiaries are defendants in several lawsuits that, among other things, challenge the subsidiaries' use of rights-of-way. The plaintiffs have sought to have these lawsuits certified as class actions. It is possible that additional suits challenging use of our rights-of-way will be filed and those plaintiffs also may seek class certification. The outcome of such litigation may increase our costs and adversely affect our operating results.

Our operations around the world are subject to regulation at the regional level (for example, the European Union), the national level (for example, the FCC) and, often, at the state, provincial, and local levels. We also operate in some areas of the world without licenses, but only as permitted through relationships with locally licensed partners. Regulating telecommunications networks and services around the world varies widely. In some countries, the range of services we are legally permitted to provide may be limited, or may change. In other countries, existing telecommunications legislation is in development, is unclear or inconsistent, or is applied in an unequal or discriminatory fashion, or inadequate judicial, regulatory or other forums are available to address these inadequacies or disputes. Changes to existing regulations or rules, or the failure to regulate going forward in areas historically regulated on matters such as network neutrality, licensing fees, environmental, health and safety, privacy, intercarrier compensation, interconnection and other areas, in general or particular to our industry, may increase costs, restrict operations or decrease revenue. Our inability or failure to comply with the telecommunications and other laws and regulations of one or more countries in which we operate could cause the temporary or permanent suspension of operations in one or more countries. We also may be prohibited from entering certain countries at all or from providing all of our services in one or more countries. In addition, many countries in which we operate are conducting regulatory or other proceedings that will affect the implementation of their telecommunications legislation. We cannot be certain of the outcome of these proceedings. These proceedings may affect how we may provide our services in these countries and the level of fees and taxes payable to the government.

Termination of relationships with key suppliers could cause delay and additional costs.

Our business depends on third-party suppliers for fiber, computers, software, optronics, transmission electronics and related components and providers of network colocation facilities and right of way rights that are integrated into our network, some of which are critical to operating our business. If any of these critical relationships is terminated, a supplier either exits or curtails its business because of economic conditions, a supplier fails to provide critical rights of use, services or equipment, or the supplier is forced to stop providing services due to legal constraints, such as patent infringement, and we cannot reach suitable alternative arrangements quickly, we may experience significant additional costs or we may not be able to provide certain services to customers.

Our consolidated revenue is concentrated in a few customers.

Approximately 16% of our consolidated revenue is concentrated among our top ten customers at year end 2016 . If we lost one or more of our major customers, or, if one or more of them significantly decreased or terminated orders for our services, our business could be materially and adversely affected.

ILECs may not provide us local access services at prices that allow us to effectively compete.

We acquire a significant portion of our local access services, the connection between our owned network and the customer premises, from incumbent local exchange carriers or ILECs. The ILECs compete directly with our business and may have a tendency to favor themselves and their affiliates to our detriment. For instance, at the end of 2013, AT&T attempted to eliminate its longer term plans (and correspondingly larger discounts) used routinely by us to purchase certain local access services from AT&T. The price increases we would have seen as the result of losing these larger discounts, price increases we would have had little choice but to pass on to our customers, would have made competing with AT&T in its operating region more difficult. We and others objected to AT&T's filings at the FCC, and following FCC intervention, AT&T withdrew these unilateral price increases. We cannot predict what AT&T may try next, and what other incumbent telephone companies may pursue.

Network access represents a very large portion of our total costs and if we face less favorable pricing and provisioning timeframes, we may be at a competitive disadvantage to the ILECs.

Sometimes it is expensive and difficult to switch new customers to our network, and lack of cooperation of incumbent carriers can slow the new customer connection process.

It is expensive, difficult and time-consuming for new customers to switch to our network if we require cooperation from the incumbent carrier where there is no direct connection between the customer and our network. Many of our principal competitors, the domestic and international incumbent carriers, are already established providers of local telephone services to all or virtually all telephone subscribers within their respective service areas. Their physical connections from their premises to those of their customers are expensive and difficult to duplicate. To complete the new customer provisioning process for a customer's location not located on our network, we rely on the incumbent carrier to process certain information. The incumbent carriers have a financial interest in retaining their customers, which could reduce their willingness to cooperate with our new customer provisioning requests, thereby adversely affecting our ability to compete and increase revenue. Further consolidation of incumbent carriers with other telecommunications service providers may make these problems more acute.

We may be liable for the information that content owners or distributors distribute over our network.

The law relating to the liability of private network operators for information carried on or disseminated through their networks is still unsettled. While we disclaim any liability for third-party content in our services agreements, we may become subject to legal claims relating to the content disseminated on our network, even though such content is owned or distributed by our customers or a customer of our customers. For example, lawsuits may be brought against us claiming that material distributed using our network was inaccurate, offensive, or violated the law or the rights of others. Claims could also involve matters such as defamation, invasion of privacy and copyright infringement. In addition, the law remains unclear over whether content may be distributed from one jurisdiction, where the content is legal, into another jurisdiction, where it is not. Companies operating private networks have been sued in the past, sometimes successfully, based on the nature of material distributed, even if the content is not owned by the network operator and the network operator has no knowledge of the content or its legality. It is not practical for us to monitor all of the content distributed using our network. We may need to take costly measures to reduce our exposure to these risks or to defend ourselves against such claims.

We may not efficiently and effectively integrate future acquired operations and thus may not fully realize the anticipated benefits from those future acquisitions.

Achieving the anticipated benefits of any acquisitions depends in part upon whether we can integrate our businesses in an efficient and effective manner. We may acquire businesses in accordance with our business strategy. Integrating any acquired businesses involves several risks, including, but not limited to:

- demands on management related to any significant increase in size after the acquisition;
- the disruption of ongoing business and the diversion of management's attention from the management of daily operations to management of integration activities;
- failure to fully achieve expected synergies and costs savings;
- unanticipated impediments in integrating departments, systems, including accounting systems, technologies, books and records, procedures and policies, and in maintaining uniform standards and controls, including internal control over financial reporting;
- loss of customers or the failure of customers to order incremental services we expect them to order;
- failure to provision services ordered by customers during the integration period;
- higher integration costs than anticipated; and
- difficulties in the assimilation and retention of highly qualified, experienced employees, many of whom may be geographically dispersed.

Successful integration of acquired businesses or operations depends on our ability to manage these operations, realize opportunities for revenue growth presented by strengthened service offerings and expanded geographic market coverage, obtain better terms from our vendors due to increased buying power, and eliminate redundant and excess costs to fully realize the expected synergies. Because of difficulties in combining geographically distant operations and systems which may not be fully compatible, we may not be able to achieve these objectives.

We cannot be certain that we will realize our anticipated benefits from our acquisitions, or that we can efficiently and effectively integrate acquired operations as planned.

Changes in regulations affecting commercial power providers may increase our costs.

In the normal course of business, we must contract with many providers of commercial power for our office, network, Gateway facilities, and colocation and data center facilities. Costs of obtaining commercial power comprise a significant component of our operating expenses. Changes in regulations that affect commercial power providers, particularly regulations related to the control of greenhouse gas emissions or other climate change related matters, could affect the costs of commercial power, which may increase the costs of providing our services.

Potential regulation of Internet service providers in the United States could adversely affect our operations.

In the United States, the FCC has, to date, treated Internet service providers as enhanced service providers. In addition, Congress has, to date, not sought to heavily regulate the provision of IP-based services. Both Congress and the FCC are considering proposals that involve greater regulation of IP-based service providers. Depending on the content and scope of any regulations, the imposition of such regulations could have a material adverse effect on our business and the profitability of our services.

The communications industry is highly competitive with participants with greater resources and a greater number of existing customers.

The communications industry is highly competitive. Many of our existing and potential competitors have financial, personnel, marketing and other resources significantly greater than ours. Many have the added competitive advantage of a larger existing customer base. In addition, significant new or increased competition could arise because of:

- the consolidation in the industry;
- allowing foreign carriers to more extensively compete in the U.S. market;
- further technological advances; and
- further deregulation and other regulatory initiatives.

In addition, future significant competitors could include new entrants to the communications industry such as content companies that have existing significant customer bases and substantial cash resources that are greater than ours. If we cannot compete successfully, our business could be significantly affected.

Rapid technological changes can lead to further competition.

The communications industry is subject to rapid and significant changes in technology. In addition, the introduction of new services or technologies, and the further development of existing services and technologies, may reduce the cost or increase the supply of certain services similar to those that we provide. As a result, our most significant competitors in the future may be new entrants to the communications industry. These new entrants may not be burdened by an installed base of outdated equipment or obsolete technology. Our future success depends, in part, on our ability to anticipate and adapt in a timely manner to technological changes.

Our international operations and investments expose us to risks that could materially adversely affect the business.

We have operations and investments outside of the United States, and rights to undersea cable capacity extending to other countries, that expose us to risks inherent in international operations. These include:

- general economic, social and political conditions;
- the difficulty of enforcing agreements and collecting receivables through certain foreign legal systems;
- tax rates in some countries may exceed those in the United States;
- United States and other country tax laws may limit our ability to repatriate cash from non-U.S. affiliates without adverse tax consequences;
- foreign currency exchange rates may fluctuate, which could adversely affect our results of operations and the value of our international assets and investments;
- non-U.S. earnings may be subject to withholding requirements or the imposition of tariffs, exchange controls or other restrictions;
- difficulties and costs of compliance with non-U.S. laws and regulations that impose restrictions on our investments and operations, with penalties for noncompliance, including loss of licenses and monetary fines;

- difficulties in obtaining licenses or interconnection arrangements on acceptable terms, if at all; and
- changes in laws and regulations relating to non-U.S. trade and investment.

We are exposed to significant currency exchange rate risks and currency transfer restrictions and our results may suffer due to currency translations and remeasurements.

Certain of our current and prospective customers derive their revenue in currencies other than U.S. dollars but are invoiced by us in U.S. dollars. The obligations of customers with substantial revenue in foreign currencies may be subject to unpredictable and indeterminate increases if such currencies depreciate relative to the U.S. dollar. Furthermore, these customers may become subject to exchange control regulations restricting the conversion of their revenue currencies into U.S. dollars. In either event, the affected customers may not be able to pay us in U.S. dollars. Similarly, declines in the value of foreign currencies (such as the devaluation of the Brazilian real and the Argentine peso discussed below) relative to the U.S. dollar could adversely affect our ability to market our services to customers whose revenue is denominated in those currencies. In addition, where we issue invoices for our services in currencies other than U.S. dollars, our results of operations may suffer due to currency translations if such currencies depreciate relative to the U.S. dollar and we cannot or do not elect to enter into currency hedging arrangements regarding those payment obligations.

We conduct a portion of our business using the British pound, the euro and the Brazilian real. Appreciation of the U.S. dollar adversely affects our consolidated revenue. Since we tend to incur costs in the same currency in which those operations realize revenue, the effect on operating income and operating cash flow is largely mitigated. However, if the U.S. dollar appreciates significantly, future revenue, operating income and operating cash flows could be materially affected. In addition, the appreciation of the U.S. dollar relative to foreign currencies reduces the U.S. dollar value of cash balances held in those currencies.

Certain Latin American economies have experienced shortages in foreign currency reserves and have adopted restrictions on the use of certain mechanisms to expatriate local earnings and convert local currencies into U.S. dollars. Any of these shortages or restrictions may limit or impede our ability to transfer or to convert those currencies into U.S. dollars and to expatriate those funds. In addition, currency devaluations in one country may have adverse effects in another country.

Economic and political conditions in Latin America pose numerous risks to our operations.

Our business operations in the Latin American region constitute a significant portion of our business. As events in the Latin American region have demonstrated, negative economic or political developments in one country in the region can lead to or exacerbate economic or political instability elsewhere in the region. Furthermore, events in recent years in other developing markets have placed pressures on the stability of the currencies of several countries in Latin America in which we operate, including Argentina, Brazil and Colombia. While certain areas in the Latin American region have experienced economic growth, this recovery remains fragile. Pressures on local currencies are likely to have an adverse effect on our customers in this region. Volatility in regional currencies and capital markets could also have an adverse effect on our ability and that of our customers to gain access to international capital markets for necessary financing, refinancing and repatriation of earnings.

In addition, any changes to the political and economic conditions in certain Latin American countries could materially and adversely affect our business.

Inflation and certain government measures to curb inflation in some Latin American countries may have adverse effects on their economies and our business and operations in those locations.

Some Latin American countries, including Brazil and Argentina, have historically experienced high rates of inflation. Inflation and some measures implemented to curb inflation have had significant negative effects on the economies of these countries. Governmental actions taken to curb inflation, coupled with speculation about possible future actions, have contributed to economic uncertainty at times in most Latin American countries. These countries may experience high levels of inflation in the future that could lead to further government intervention in the economy, including the introduction of government policies that could adversely affect our results of operations in those locations. In addition, if any of these countries experience high rates of inflation, we may not be able to adjust the price of our services sufficiently to offset the effects of inflation on our cost structures in those locations. A high inflation environment would also have negative effects on the level of economic activity and employment and adversely affect our business.

Our agreements with certain agencies of the U.S. Government impose significant requirements on us. Violating those agreements could have severe consequences.

We are a party to an agreement with the U.S. Departments of Homeland Security, Justice and Defense addressing the U.S. government's national security and law enforcement concerns. This agreement imposes significant requirements on us related to information storage and management; traffic management; physical, logical, and network security arrangements; personnel screening and training; and other matters. We are also party to an agreement with the U.S. Department of Defense addressing the U.S. government's national security concerns. This agreement imposes significant requirements on us related to the composition and qualifications of the Level 3 Communications, Inc. board of directors; the limitation of the influence or control over us of non-U.S. persons; physical, logical, and network security arrangements; and other matters.

While we expect to continue to comply fully with our obligations under both above-mentioned agreements, it is impossible to eliminate completely the risk of violating either. The consequences of violating these agreements could be severe, potentially including the revocation of our FCC licenses in the U.S., which would cause the cessation of our U.S. operations, and/or losing permissions required to do business with the U.S. Government.

We are subject to the U.S. Foreign Corrupt Practices Act (the "FCPA") and other anticorruption laws, and our failure to comply therewith could cause penalties which could harm our reputation and have a material adverse effect on our business.

We are subject to the FCPA, which generally prohibits companies and their intermediaries from making improper payments to foreign officials for the purpose of obtaining or keeping business and/or other benefits. Although we have policies and procedures designed to ensure that we, our employees and agents comply with the FCPA and other anticorruption laws, there can be no assurance that such policies or procedures will work effectively all of the time or protect us against liability for actions taken by our agents, employees and intermediaries regarding our business or any businesses we acquire.

We currently operate and in the future may operate in several jurisdictions that pose a high risk of potential anticorruption violations. If we do not comply with the FCPA and other laws governing the conduct of business with government entities (including local laws), we may be subject to criminal and civil penalties and other remedial measures. Any investigation of any potential violations of the FCPA or other anticorruption laws by U.S. or foreign authorities could have an adverse effect on our business.

The U.K. Bribery Act 2010 (the "Bribery Act") reformed the United Kingdom ("U.K.") law in relation to bribery and corruption. As well as containing provisions about bribery of public officials, the Bribery Act includes a criminal offense of failing to prevent bribery by relevant commercial organizations. This offense applies when any person associated with the organization offers or accepts bribery anywhere in the world intending to obtain or retain a business advantage for the organization or in the conduct of business. The Bribery Act has wide ranging implications in particular for business in the U.K., including our subsidiaries. However, it also has a wide-ranging extra-territorial effect. The Bribery Act is broader in scope than the FCPA because it directly addresses commercial bribery besides bribery of government officials and it does not recognize certain exceptions, notably facilitation payments permitted by the FCPA. Under the Bribery Act, it is a defense to the accusation of failure to prevent bribery for a commercial organization to show it had in place "adequate procedures" designed to prevent such acts.

As with the FCPA, if we do not comply with the Bribery Act and similar laws in the U.K. or elsewhere, such as The Federal Law n. 12.846/13, which is known as the "Brazilian Anti-corruption Law" that became effective on February 2, 2014, that apply to our business, we may be subject to criminal and civil penalties and other remedial measures.

Risks Related to Our Liquidity and Financial Resources

Disruptions in the financial markets could affect our ability to obtain debt or equity financing or refinance our existing indebtedness on reasonable terms (or at all), and have other adverse effects on us.

Disruptions in the commercial credit markets could cause a tightening of credit markets. The effects of recent credit market disruptions were widespread, and it is impossible to predict whether the improvement in the global credit markets will continue. Because of credit market turmoil, we may not obtain debt or equity financing or refinance our existing indebtedness on favorable terms (or at all), which could affect our strategic operations and our financial performance and force modifications to our operations.

If we cannot comply with the restrictions and covenants in our debt agreements, there would be a default under these agreements, and this could cause an acceleration of payment of funds borrowed.

If we were unable to comply with the restrictions and covenants in any of our debt agreements, there would be a default under those agreements. As a result, borrowings under other debt instruments that contain cross-acceleration or cross-default provisions may also be accelerated and become due and payable. If any of these events occur, there can be no assurance we could make necessary payments to the lenders or that we could find alternative financing. Even if we obtained alternative financing, there can be no assurance it would be on terms that are acceptable.

If we experience a change in control or certain other events, we may be unable to satisfy our obligations to repurchase our outstanding notes as required under our outstanding debt agreements.

Upon the occurrence of certain events defined in the various debt agreements relating to our outstanding debt, we are required to make an offer to purchase all of our outstanding notes at a purchase price generally equal to 101% of the principal amount of the notes, plus accrued and unpaid interest thereon (if any). In addition, if we must make an offer to purchase one of the outstanding issues of our notes, the debt agreements relating to our other issues of notes may require us to repurchase that other debt upon a change in control or termination of trading. We may not have or be able to borrow enough funds to pay the purchase price for all the notes tendered by holders seeking to accept the offer to purchase.

We have substantial debt, which may hinder our growth and put us at a competitive disadvantage.

Our substantial debt may have important consequences, including:

- the ability to obtain additional financing for acquisitions, working capital, investments and capital or other expenditures could be impaired or financing may not be available on acceptable terms;

- a substantial portion of our cash flows will be used to make principal and interest payments on outstanding debt, reducing the funds otherwise available for operations and future business opportunities;

- a substantial decrease in cash flows from operating activities or an increase in expenses could make it difficult to meet debt service requirements and force modifications to operations;
- having more debt than certain of our competitors may place us at a competitive disadvantage; and

- substantial debt may make us more vulnerable to a downturn in business or the economy generally.

We had a ratio of earnings to fixed charges of 2.3 for the year ended December 31, 2016 , 1.4 for the year ended December 31, 2015 and 1.3 for the year ended December 31, 2014. We had substantial deficiencies of earnings to cover fixed charges of approximately $71 million and $374 million for the years ended December 31, 2013 and 2012, respectively.

We may not be able to repay our existing debt; failure to do so or refinance the debt could prevent us from implementing our strategy and realizing anticipated profits.

If we could not refinance our debt or to raise additional capital on acceptable terms, our ability to operate our business would be impaired. As of December 31, 2016 , we had an aggregate of approximately $11.009 billion of current and long-term debt on a consolidated basis (excluding debt discounts and fair value adjustments), and approximately $10.917 billion of stockholders' equity. Of the long-term debt, approximately $7 million is due to mature in 2017 , $306 million is due to mature in 2018 , $822 million is due to mature in 2019 and $1,804 million is due to mature in 2020 , in each case excluding debt discounts and fair value adjustments. This information does not reflect the recent refinancing transaction completed by our wholly owned subsidiary, Level 3 Financing in the first quarter 2017.

Our ability to make interest and principal payments on our debt and borrow additional funds on favorable terms depends on the future performance of the business. If we do not have enough cash flow in the future to make interest or principal payments on our debt, we may have to refinance all or a part of our debt or to raise additional capital. We cannot be sure that we will be able to refinance our debt or raise additional capital on acceptable terms.

Restrictions and covenants in our debt agreements limit our ability to conduct our business and could prevent us from obtaining needed funds in the future.

Our debt and financing arrangements contain several significant limitations that restrict our ability to, among other things:

- borrow additional money or issue guarantees;

- pay dividends or other distributions to stockholders;

- make investments;

- create liens on assets;
- sell assets;
- enter into sale-leaseback transactions;
- enter into transactions with affiliates; and
- engage in mergers or consolidations.

Risks Related to Our Common Stock

The unpredictability of our quarterly results may adversely affect the trading price of our common stock.

Our revenue and operating results will vary significantly from quarter to quarter due to several factors, many of which are outside of our control and any of which may cause the price of our common stock to fluctuate. The primary factors, among other things, that may affect our quarterly results include:

- the timing of costs associated with operating our business and integration activities regarding any completed acquisitions;
- demand for our services;
- loss of customers or the ability to attract new customers;
- changes in pricing policies or the pricing policies of our competitors;
- costs related to acquisitions of technology or businesses;
- changes in regulatory rulings; and
- general economic conditions and those specific to the communications and related industries.

A delay in generating revenue or the timing of recognizing revenue and expenses could cause significant variations in our operating results from quarter to quarter. It is possible that in some future quarters our results may be below analysts' and investors' expectations. In these circumstances, the price of our common stock will likely decrease.

If certain transactions occur regarding our capital stock, we may be unable to fully utilize our net operating loss carry forwards, or NOLs, to reduce our U.S. federal income taxes.

As of December 31, 2016 , we had NOLs of approximately $9 billion for U.S. federal income tax purposes (after taking into account the effects of Section 382 of the Internal Revenue Code of 1986, as amended (the "Code")). If certain transactions occur regarding our capital stock that result in a cumulative ownership change of more than 50 percentage points by 5% stockholders over a three-year period as determined under rules prescribed by the Code and applicable regulations, annual limitations would be imposed regarding our ability to utilize our NOLs and certain current deductions against any taxable income we achieve in future periods.

We have entered into transactions over the applicable three-year period that, when combined with other changes in ownership that are outside of our control, have resulted in cumulative changes in the ownership of our capital stock. Additional transactions we enter into, and transactions by existing 5% stockholders and transactions by holders that become new 5% stockholders that we do not participate in, could cause us to incur a 50 percentage point ownership change by 5% stockholders and, if we trigger the above noted Code imposed limitations, such transactions would prevent us from fully utilizing NOLs and certain current deductions to reduce our U.S. federal income taxes and could result in a substantial income tax expense to our consolidated statement of operations. In addition, these limitations could cause us not to pursue otherwise favorable acquisitions and other transactions involving our capital stock, or could reduce the net benefits to be realized from any such transactions.

In April 2011, we entered into the rights agreement to deter acquisitions of our common stock that might reduce our ability to use our NOLs. Under the rights agreement, from and after the record date of April 21, 2011, each share of our common stock carries with it one preferred share purchase right that could discourage a third-party from proposing a change of control or other strategic transaction concerning Level 3 or otherwise have the effect of delaying or preventing a change of control of Level 3 that other stockholders may view as beneficial.

In July 2014, the rights agreement was amended to provide that the rights issued under the rights agreement will expire at or prior to the earliest of:

- October 31, 2017;
- the time at which the rights are redeemed;
- the time at which the rights are exchanged;
- the time at which our board of directors determines that the NOLs are utilized in all material respects or that an ownership change under Section 382 of the Internal Revenue Code of 1986, as amended, would not adversely effect in any material respect the time period in which we could use the NOLs, or materially impair the amount of the NOLs we could use in any particular time period, for applicable tax purposes; or
- a determination by our board of directors, prior to the date that the rights are distributed, that the rights agreement and the rights are no longer in our and our stockholders' best interests.

Under our certificate of incorporation, we can issue more shares of our common stock than are currently outstanding. Such future issuances of our common stock may have a dilutive effect on the earnings per share and voting power of our stockholders.

Our certificate of incorporation, as currently in effect, authorizes us to issue to up to 433,333,333 shares of our common stock, which is a greater number of shares of common stock than are outstanding. If our Board of Directors elects to issue additional shares of common stock in the future, whether in public offerings, for mergers and acquisitions or otherwise, these additional issuances may dilute the earnings per share and voting power of our stockholders. Depending on the number of shares being issued and the particular circumstances, the Board of Directors may be able to complete a particular issuance without further stockholder action.

Anti-takeover provisions in our charter and by-laws could limit the share price and delay a change of management.

Our restated certificate of incorporation and by-laws contain provisions that could make it more difficult or even prevent a third-party from acquiring us without the approval of our incumbent Board of Directors. These provisions, among other things:

- prohibit stockholder action by written consent in place of a meeting;
- limit the right of stockholders to call special meetings of stockholders;

- limit the right of stockholders to present proposals or nominate directors for election at annual meetings of stockholders; and
- authorize our board of directors to issue preferred stock in one or more series without any action on the part of stockholders.

In addition, the terms of most of our long-term debt require that upon a “change in control,” as defined in the agreements that contain the terms and conditions of the long-term debt, we make an offer to purchase the outstanding long term debt at either 100% or 101% of the aggregate principal amount of that long term debt.

These provisions could limit the price that investors might pay in the future for shares of our common stock and significantly impede the ability of the holders of our common stock to change management. Provisions and agreements that inhibit or discourage takeover attempts could reduce the market value of our common stock.

If a large number of shares of our common stock is sold in the public market, the sales could reduce the trading price of our common stock and impede our ability to raise future capital.

We cannot predict what effect, if any, future issuances by us of our common stock will have on the market price of our common stock. In addition, shares of our common stock we issue in connection with an acquisition may not be subject to resale restrictions. The market price of our common stock could drop significantly if certain large holders of our common stock, or recipients of our common stock in connection with an acquisition, sell all or a significant portion of their shares of common stock or are perceived by the market as intending to sell these shares other than in an orderly manner. In addition, these sales could impair our ability to raise capital through the sale of additional common stock in the capital markets.

The market price of our common stock has been volatile and, in the future, the market price of our common stock may fluctuate substantially due to many factors.

The market price of our common stock has been subject to volatility and, in the future, the market price of our common stock may fluctuate substantially due to many factors, including:

- the depth and liquidity of the trading market for our common stock;
- variations in actual or anticipated operating results;
- changes in estimated results by securities analysts;
- market conditions in the communications and information services industries;
- announcement and performance by competitors;
- regulatory actions; and
- general economic conditions.

In addition, market fluctuations could have a material adverse effect on the market price or liquidity of our common stock.

Other Risks

We have environmental liabilities from our historical operations.

There could be environmental liabilities arising from historical operations of our predecessors, for which we may be liable. Our operations and properties are subject to a wide variety of laws and regulations relating to environmental protection, human health and safety. These laws and regulations include those about the use and management of hazardous and non-hazardous substances and wastes. We have made and will continue to make significant expenditures relating to our environmental compliance obligations. Despite our best efforts, we may not at all times comply with all of these requirements.

In connection with certain historical operations, as of February 1, 2017, we have responded to or been notified of potential environmental liability at approximately 173 properties. We are engaged in addressing or have liquidated environmental liabilities at 89 of those properties. Of these: (a) we have formal commitments or other potential future costs at 23 sites; (b) there are nine sites with unknown future costs; and (c) there are 57 sites with no likely future costs. The remaining properties have been dormant for several years. We could potentially be held liable, jointly or severally, and without regard to fault, for the costs of investigation and remediation of these sites. The discovery of additional environmental liabilities related to historical operations or changes in existing environmental requirements could have a material adverse effect on our business.

We are exposed to legal proceedings and contingent liabilities that could result in material losses we have not reserved against.

We are party to various legal proceedings and are subject to certain important contingent liabilities described more fully in Note 15 , " Commitments, Contingencies and Other Items ," to our consolidated financial statements included in this Form 10-K. If one or more of these legal proceedings or contingent liabilities were to be resolved in a manner adverse to us, we could suffer material losses. Certain of these contingent liabilities could have a material adverse effect on our business besides the effect of any potential monetary judgment or sanction against us. Furthermore, any legal proceedings, regardless of the outcome, could cause substantial costs and diversion of resources. Assets and entities we have acquired may be subject to unknown or contingent liabilities for which we may have no recourse, or only limited recourse to the entity from which the business was acquired (or its stakeholders).

Terrorist attacks and other acts of violence or war may adversely affect the financial markets and our business.

There can be no assurance there will not be future terrorist attacks. These attacks or armed conflicts may directly affect our physical facilities or those of our customers. These events could cause consumer confidence and spending to decrease or result in increased volatility in the U.S. and world financial markets and economy. Any of these occurrences could materially adversely affect our business.

The pension plans previously maintained by Global Crossing and regarding our operations before 1997 may require additional funding and negatively affects cash flows.

Certain North American and European hourly and salaried employees of Global Crossing are covered by defined benefit pension plans. On December 31, 1996, the North American plan was frozen and all employees hired thereafter are not eligible to participate in the plan. The U.K. plans were closed to new employees on December 31, 1999. The pension expense and required contributions to these pension plans are directly affected by the value of plan assets, the projected rate of return on plan assets, the actual rate of return on plan assets and the actuarial assumptions used to measure the defined benefit pension plan obligations. As of December 31, 2016 , the projected benefit obligation under these pension plans and the pension plans regarding non-Global Crossing operations prior to 1997 was approximately $158 million ($69 million for U.S. plans and $89 million for U.K. plans) and the value of plan assets was approximately $136 million (approximately $67 million for U.S. plans and $69 million for U.K. plans), resulting in these pension plans being underfunded by $22 million . If plan assets perform below expectations, future pension expense and funding obligations will increase, which would have a negative effect on our cash flows from operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our headquarters are located on 46 acres in the Interlocken Advanced Technology Environment within the City and County of Broomfield, Colorado. The campus facility, which we own, encompasses approximately 850,000 square feet of office space.

We also lease or own significant corporate office space in the following cities and lease smaller sales, administrative, and support offices around the world:

- North America: Atlanta, Georgia; Littleton, Colorado; Miami, Florida; Montreal, Canada; New York, New York; Phoenix, Arizona; Pittsburgh, Pennsylvania; Southfield, Michigan; and Tulsa, Oklahoma
- Europe: Basingstoke, England; Crewe, England; Dublin, Ireland; London, England; Amsterdam, The Netherlands; and Paris, France
- Latin America: Bogota, Colombia; Buenos Aires, Argentina; Caracas, Venezuela; Lima, Peru; Quito, Ecuador; Santiago, Chile; and Sao Paulo, Brazil
- Asia/Pacific: Hong Kong, China; Singapore and Tokyo, Japan

We own or lease numerous cable landing stations and telehouses throughout the world related to undersea and terrestrial cable systems. Furthermore, we own or lease properties to house and operate our fiber optic backbone and distribution network facilities, our point-to-point distribution capacity, as well as our switching equipment and connecting lines between other carriers' equipment and facilities and the equipment and facilities of our customers. Our Gateway facilities are designed to house local sales staff, operational staff, our transmission and IP routing/switching facilities and technical space to accommodate colocation of equipment by high-volume Level 3 customers. We operate approximately 15.5 million square feet of space for our Gateway and technical or transmission facilities. Our Gateway space is either owned by and other properties relating to our network operations, see Item 1, "Business -- Our Communications Network."

We have entered into various agreements regarding our unused office and technical space to reduce our ongoing operating expenses regarding such space.

Our existing properties are in good condition and are suitable for the conduct of our business.

ITEM 3. LEGAL PROCEEDINGS

For information regarding legal proceedings in which we are involved, see Note 15 , " Commitments, Contingencies and Other Items ," to our Consolidated Financial Statements included in this Form 10-K.

ITEM 4. MINING SAFETY DISCLOSURES

Not applicable.

Part II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information.

Our common stock is traded on the New York Stock Exchange under the symbol "LVLT." As of February 22, 2017 , there were approximately 5,373 holders of record of our common stock, par value $.01 per share. The table below sets forth, for the calendar quarters indicated, the high and low per share closing sales prices of our common stock as reported by the NYSE Composite Tape for the quarters and the years indicated.

Year Ended December 31, 2016	High	Low
First Quarter	$ 53.74	$ 42.74
Second Quarter	54.21	47.43
Third Quarter	57.18	46.38
Fourth Quarter	57.20	45.09

Year Ended December 31, 2015	High	Low
First Quarter	$ 55.46	$ 47.02
Second Quarter	56.90	52.11
Third Quarter	54.16	41.57
Fourth Quarter	54.45	43.00

Equity Compensation Plan Information.

We have one equity compensation plan under which we may issue shares of our common stock to employees, officers, directors and consultants, which is called The Level 3 Communications, Inc. Stock Incentive Plan. In addition, in connection with our acquisition of Global Crossing, we assumed sponsorship of the 2003 Global Crossing Limited Stock Incentive Plan. Options outstanding under the 2003 Global Crossing Limited Stock Incentive Plan at the closing of the acquisition were automatically exchanged for options to purchase shares of our common stock. Since this plan’s term has expired, no shares remain for future issuances under this plan, but shares do remain for awards outstanding as of the expiration of the term. The following table provides information about the shares of our common stock that may be issued upon exercise of awards under the Level 3 Communications, Inc. Stock Incentive Plan (in the ‘‘Equity compensation plans approved by stockholders’’ category) and the 2003 Global Crossing Limited Stock Incentive Plan (in the ‘‘Equity compensation plans not approved by stockholders’’ category) as of December 31, 2016 .

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights		Weighted-average exercise price of outstanding options, warrants and rights		Number of securities remaining available for future issuance under equity compensation plans	
Equity compensation plans approved by stockholders	6,096,699	(1)	$ —	(3)	13,659,866	(1)
Equity compensation plans not approved by stockholders	85,523	(2)	$ —	(3)	—	

(1) Includes restricted stock units and performance restricted stock units (''PRSUs''). For purposes of this table, each PRSU was assumed to be included at the maximum possible issuance of our common stock (which would be maximum target performance) from the total number of shares reserved for issuance under the Level 3 Communications, Inc. Stock Incentive Plan.

(2) The 2003 Global Crossing Limited Stock Incentive Plan provided for the granting of (i) stock options, (ii) stock appreciation rights and (iii) other stock based awards, including, without limitation, restricted stock units, to eligible participants. Amounts shown indicate the number of awards outstanding under the 2003 Global Crossing Limited Stock Incentive Plan at December 31, 2016 .

(3) At December 31, 2016, there were no outstanding awards that included an ''exercise price''.

Dividend Policy.

Our current dividend policy, in effect since April 1, 1998, is to retain future earnings for use in our business. As a result, our directors and management do not anticipate paying any cash dividends on shares of our common stock in the foreseeable future. In addition, under certain of our debt covenants we may be restricted from paying cash dividends on shares of our common stock. We would also need to address any restrictions contained in the CenturyLink Merger agreement or obtain a waiver.

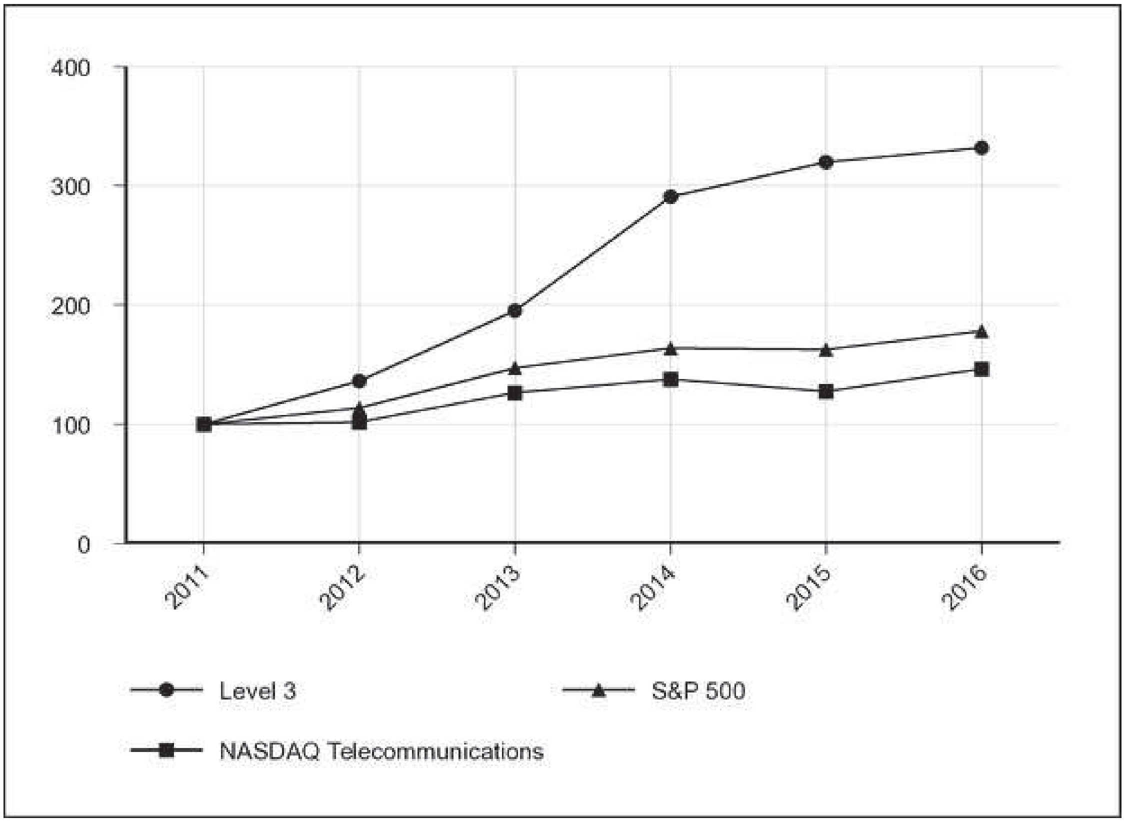
Performance Graph.

The following performance graph shall not be deemed to be incorporated by reference by means of any general statement incorporating by reference this annual report on Form 10-K into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate such information by reference, and shall not otherwise be deemed filed under such acts.

The performance graph compares the cumulative total return of our common stock for the five year period from 2012 through 2016 with the S&P ® 500 Index and the Nasdaq Telecommunications Index. The performance graph assumes that the value of the investment was $100 on December 31, 2011 , and that all dividends and other distributions were reinvested.

Table of Contents

Comparison of Five Year Cumulative Total Return
Among Our Common Stock, the S&P® 500 Index
and the Nasdaq Telecommunications Index



	12/11	12/12	12/13	12/14	12/15	12/16
Level 3 common stock	$ 100.00	$ 136.02	$ 195.23	$ 290.64	$ 319.95	$ 331.72
S&P 500® Index	100.00	113.41	146.98	163.72	162.53	178.02
NASDAQ Telecommunications	100.00	102.00	126.50	137.77	127.44	146.39

ITEM 6. SELECTED FINANCIAL DATA

The Selected Financial Data of Level 3 Communications, Inc. and its subsidiaries appear below.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(dollars in millions, except per share amounts)				
Results of Operations:					
Revenue (1)	$ 8,172	$ 8,229	$ 6,777	$ 6,313	$ 6,376
Net Income (Loss) (2)	677	3,433	314	(109)	(422)
Per Common Share:					
Net Income (Loss) - Basic (2)	1.89	9.71	1.23	(0.49)	(1.96)
Net Income (Loss) - Diluted (2)	1.87	9.58	1.21	(0.49)	(1.96)
Dividends declared (3)	—	—	—	—	—
Financial Position:					
Total Assets (6)	$ 24,888	$ 24,017	$ 20,802	$ 12,754	$ 13,174
Current portion of long-term debt (4)	7	15	349	31	216
Long-Term Debt, less current portion (4) (6)	10,877	10,866	10,839	8,211	8,383
Stockholders' Equity (5)	10,917	10,126	6,363	1,411	1,171

(1) On October 31, 2014, we completed the acquisition of tw telecom inc. ("tw telecom"). During 2014, we recorded revenue attributable to tw telecom of approximately $285 million.

(2) In 2012, we recognized a $160 million loss on modification and extinguishment of debt as a result of the refinancing of the $650 million Tranche B II Term Loan and $550 million Tranche B III Term Loan in October 2012, the refinancing of the $1.4 billion Tranche A Term Loan in August 2012 and the repayment of existing vendor financing obligations, the redemption of the 8.75% Senior Notes due 2017 in August 2012, the redemption of the 9.25% Senior Notes due 2014 in February 2012 and the exchange of a portion of the 15% Convertible Senior Notes due 2013 in March 2012. We also recognized $34 million of restructuring charges. We completed an updated analysis and revised our estimated future cash flows of our asset retirement obligations as a result of a strategic review of our real estate portfolio in the fourth quarter of 2012. As a result, we reduced our asset retirement obligations liability by $73 million with an offsetting reduction to property, plant and equipment of $24 million, selling, general and administrative expenses of $47 million and depreciation and amortization of $2 million. In addition, as a result of the refinancing of the Tranche A Term Loan in 2012, two interest rate swap agreements maturing in early 2014 that had effectively hedged changes in the interest rate on a portion of the Tranche A Term Loan were deemed "ineffective" under GAAP. We recognized a non-cash loss on the agreements of approximately $60 million (excluding accrued interest), which represented the cumulative loss recorded in Accumulated Other Comprehensive Income (Loss) ("AOCI") at the date the instruments ceased to qualify as hedges.

In 2013, we recognized an $84 million loss on modification and extinguishment of debt as a result of refinancing our $815 million Tranche B 2019 Term Loan and $595.5 million Tranche B 2016 Term Loan in August 2013, our $1.2 billion Tranche B-II 2019 Term Loan in October 2013 and our $640 million 10% Senior Notes due 2018 and $300 million Floating Rate Senior Notes due 2015 in December 2013. Additionally, we incurred $47 million of restructuring charges.

In 2014, we issued $600 million aggregate principal amount of our 5.75% Senior Notes due 2022. The net proceeds from the offering of the notes, together with cash on hand, were used to redeem the $605 million aggregate principal amount outstanding of our 11.875% Senior Notes due 2019. We recognized a debt extinguishment loss of $53 million associated with this transaction during the fourth quarter of 2014.

In 2014, we also recognized a $100 million income tax benefit primarily related to the release of a foreign deferred tax valuation allowance.

In 2015, we redeemed Level 3 Financing's 9.375% Senior Notes due 2019 together with cash on hand, from the issuance on January 29, 2015 of its 5.625% Senior Notes due 2023. We recognized a loss on extinguishment of debt of $36 million associated with this transaction in the second quarter of 2015. Level 3 Financing also issued $700 million aggregate principal amount of its 5.125% Senior Notes due 2023 and $800 million aggregate principal amount of its 5.375% Senior Notes due 2025. The net proceeds from the offering of these notes together with cash on hand, were used to redeem all $1.2 billion aggregate principal amount of Level 3 Financing's 8.125% Senior Notes due 2019 and all $300 million aggregate principal amount of our 8.875% Senior Notes due 2019. In the second quarter 2015, we recognized a loss on extinguishment of debt of $100 million as a result of these redemptions. Level 3 Financing completed the refinancing of its $2 billion senior secured Tranche B Term Loan due 2022 with an aggregate $2 billion principal amount of a new senior secured Tranche B-II 2022 Term Loan. In the second quarter of 2015, we recognized a loss on modification and extinguishment of debt of $27 million as a result of this refinancing. In the fourth quarter 2015, Level 3 Financing issued $900 million aggregate principal amount of its 5.375% Senior Notes due 2024. The net proceeds from the offering of the 5.375% Senior Notes due 2024, together with cash on hand, were used to redeem all $900 million aggregate principal amount of our 8.625% Senior Notes due 2020. We recognized a loss on modification and extinguishment of debt of approximately $55 million associated with this transaction during the fourth quarter of 2015.

Effective September 30, 2015, we deconsolidated our Venezuelan subsidiary from our consolidated financial statements. This change resulted in a one-time charge of $171 million, which includes $83 million of bolivar denominated cash and $40 million of intercompany receivables from our Venezuelan subsidiary during the third quarter 2015.

In the fourth quarter of 2015, with the continued expectation of generating income before taxes in the United States, we released a significant portion of our valuation allowance against our net U.S. federal and state deferred tax asset position. The release of the valuation allowance benefited income tax expense and net income by approximately $3.3 billion .

On April 21, 2016, all of the outstanding principal amount of the 7% Senior Notes Due 2020 was redeemed at a redemption price equal to 104.138% of the principal amount, along with accrued and unpaid interest to but excluding the redemption date. To fund the redemption of these notes, Level 3 Financing used the net proceeds, along with cash on hand, from the March 22, 2016, issuance of its 5.25% Senior Notes due 2026. We recognized a loss on modification and extinguishment of debt of approximately $40 million in Other Expense in the second quarter of 2016 as a result of the redemption of the 7% Senior Notes due 2020.

In 2016, we recognized a $22 million income tax benefit from the vesting of stock based compensation due to the adoption of ASU 2016-09 *,* Improvements to Employee Share-Based Payment Accounting.

In 2016, we recognized an estimated one-time $110 million income tax benefit related to the issuance of new regulations under Internal Revenue Code Section 987 addressing the taxation of foreign currency translation gains and losses arising from foreign branches.

In 2016, we recognized an $82 million income tax benefit related to the release of deferred tax valuation allowances primarily in Germany, Brazil, and Mexico.

In 2016 we recognized a $24 million income tax expense related to income tax rate changes.

(3) Our current dividend policy, in effect since April 1998, is to retain future earnings for use in our business. As a result, management does not anticipate paying cash dividends on shares of common stock in the foreseeable future. In addition, we are restricted under certain debt-related covenants from paying cash dividends on shares of our common stock. We would also need to address any restrictions contained in the CenturyLink Merger agreement or obtain a waiver of those restrictions.

(4) In 2012, we refinanced our existing $650 million Tranche B II Term Loan and $550 million Tranche B III Term Loan under our existing senior secured credit facility through the creation of a new term loan in the aggregate principal amount of $1.2 billion (the "Tranche B-II 2019 Term Loan") along with cash on hand. We also fully repaid the outstanding principal amount of our Commercial Mortgage due 2015 along with accrued interest which was approximately $63 million. Also in 2012, we completed the offering of $300 million aggregate principal amount of our 8.875% Senior Notes due 2019 in a private offering. The net proceeds from that offering were used for general corporate purposes, including the repurchase, redemption, repayment or refinancing of our and our subsidiaries' existing indebtedness. Additionally in 2012, we completed the offering of $775 million aggregate principal amount of our 7% Senior Notes due 2020 in a private offering. The net proceeds from the offering of the notes, along with cash on hand, were used to redeem all of our outstanding 8.75% Senior Notes due 2017, including the payment of accrued and unpaid interest and applicable premiums. We refinanced our existing $1.4 billion Tranche A Term Loan under our existing senior secured credit facility through the creation of new term loans in the aggregate principal amount of $1.415 billion (the "New Term Loans") along with cash on hand and used the remaining net proceeds to repay $15 million in principal amount plus a premium for existing vendor financing obligations. Further in 2012, we exchanged approximately $100 million aggregate principal amount of our outstanding 15% Convertible Senior Notes due 2013 for approximately 5.4 million shares of our common stock, including an inducement premium. Also in 2012, We issued $900 million aggregate principal amount of our 8.625% Senior Notes due 2020. A portion of the net proceeds from the offering were used to redeem all of our outstanding 9.25% Senior Notes due 2014 in aggregate principal amount of $807 million.

In 2013, we repaid at maturity approximately $172 million of our 15% Convertible Senior Notes due 2013. We also refinanced our existing $815 million Tranche B 2019 Term Loan through the creation of the $815 million Tranche B-III 2019 Term loan. We also refinanced our $595.5 million Tranche B 2016 Term Loan and $1.2 billion Tranche B-II 2019 Term Loan through the creation of a new term loan in the aggregate principal amount of $1.796 billion (the "Tranche B 2020 Term Loan"). Additionally, we completed the offering of $640 million aggregate principal amount of our 6.125% Senior Notes due 2021. The proceeds from the offering, together with cash on hand, were used to redeem all of the outstanding 10% Senior Notes due 2018. Also in 2013, we completed the offering of $300 million aggregate principal amount of our Floating Rate Senior Notes due 2018. The net proceeds of these notes, together with cash on hand, were used to redeem all of the outstanding Floating Rate Notes due 2015. Finally in 2013, the holders of approximately $200 million aggregate principal amount of our outstanding 6.5% Convertible Senior Notes due 2016 converted these notes for approximately 10.8 million shares of our common stock. The remaining $1 million principal amount of our 6.5% Convertible Senior Notes due 2016 was redeemed with cash on hand.

In 2014, Level 3 Escrow II, Inc. issued $1.0 billion in aggregate principal amount of its 5.375% Senior Notes due 2022 (the “5.375% Senior Notes due 2022”). The 5.375% Senior Notes due 2022 were assumed by Level 3 Financing, Inc., our direct wholly owned subsidiary, and the proceeds were used to refinance certain existing indebtedness of tw telecom. Additionally, we entered into a ninth amendment agreement to the Existing Credit Agreement to incur $2.0 billion in aggregate borrowings under the Existing Credit Agreement through the creation of a new Tranche B 2022 Term Loan (the "Tranche B 2022 Term Loan"). The net proceeds from both the 5.375% Senior Notes due 2022 and the Tranche B 2022 Term Loan were used to finance the cash portion of the consideration payable to tw telecom stockholders and to refinance certain existing indebtedness of tw telecom, including fees and premiums, in connection with the closing of the tw telecom acquisition. Further, in 2014, we issued a total of $600 million aggregate principal amount of our 5.75% Senior Notes due 2022 (the “5.75% Senior Notes”). The net proceeds from the offering of the 5.75% Senior Notes, together with cash on hand were used to redeem all of our outstanding 11.875% Senior Notes due 2019. In 2014, we issued approximately 5 million shares of common stock when holders of approximately $142 million of our 7% Convertible Senior Notes due 2015 converted these notes.

Refer to Note 10 - Long-Term Debt in the notes to the Consolidated Financial Statements for our offerings and refinancings in 2016 and 2015 .

Long-term debt, less current portion includes capital lease obligations. Refer to "Contractual Obligations" within Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations for further discussion of our total obligations.

(5) In 2012, we issued approximately 5.4 million shares of common stock, including an inducement premium, in exchange for approximately $100 million aggregate principal amount of our outstanding 15% Convertible Senior Notes due 2013.

In 2013, we issued approximately 10.8 million shares of common stock when holders of approximately $200 million of our 6.5% Convertible Senior Notes due 2016 converted these notes.

In 2014, we issued approximately 5 million shares of common stock when holders of approximately $142 million of our 7% Convertible Senior Notes due 2015 converted these notes.

In 2014, as a result of the tw telecom acquisition, we issued approximately 96.9 million shares of our common stock to former holders of tw telecom common shares, stock options, restricted stock unit awards and restricted stock units.

In 2015, we issued approximately 12 million shares of common stock when holders of the remaining $333 million of our 7% Convertible Senior Notes due 2015 converted these notes.

In 2016, we adopted ASU 2016-09, Improvements to Employee Share-Based Payment Accounting, which required adjustments to be reflected as of January 1, 2016. Upon adoption, we recognized previously unrecognized excess tax benefits using the modified retrospective transition method, which resulted in a cumulative-effect adjustment of $42 million recorded to accumulated deficit as of January 1, 2016.

(6) Reflects retrospective application of the requirements of ASU 2015-03 “Simplifying the Presentation of Debt Issuance Costs”.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with our Consolidated Financial Statements (including the notes thereto) included elsewhere herein and the description of our business in Item 1, "Business".

Executive Summary

Overview

We are a facilities-based provider of a broad range of communications services. Revenue for communications services is generally recognized on a monthly basis as these services are provided. For contracts involving private line, wavelength and dark fiber services, we may receive upfront payments for services to be delivered for a period of generally up to 25 years. In these situations, we defer the revenue and amortize it on a straight-line basis to earnings over the term of the contract. At December 31, 2016 , for contracts where upfront payments were received for services to be delivered in the future, our weighted average remaining contract period was approximately 12 years.

On October 31, 2016, we entered into an agreement and plan of merger (the "Merger Agreement") with CenturyLink, Inc., a Louisiana corporation ("CenturyLink"), Wildcat Merger Sub 1 LLC, a Delaware limited liability company and an indirect wholly owned subsidiary of CenturyLink ("Merger Sub 1"), and WWG Merger Sub LLC, a Delaware limited liability company and an indirect wholly owned subsidiary of CenturyLink ("Merger Sub 2"), pursuant to which, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, we will be acquired by CenturyLink in a cash and stock transaction, including the assumption of our debt (the "CenturyLink Merger").

As of September 30, 2015, we deconsolidated our Venezuelan subsidiary and began accounting for our investment in that subsidiary using the cost method of accounting in the fourth quarter of 2015. This change resulted in a one-time charge of $171 million to adjust the Venezuelan subsidiary's assets and liabilities to estimated fair value in the third quarter of 2015. Our financial results do not include the operating results of our Venezuelan subsidiary subsequent to September 30, 2015. Any dividends from our Venezuelan subsidiary are recorded as other income upon receipt of the cash. Please see Note 1 to the accompanying Consolidated Financial Statements and additional discussion in this Management's Discussion and Analysis of Financial Condition and Results of Operations under "Venezuela Effects" in Results of Operations.

On October 31, 2014, we completed the acquisition of tw telecom inc. (“tw telecom”) and tw telecom became our indirect, wholly owned subsidiary through a tax-free, stock and cash reorganization.

We pursue the strategies discussed in Item 1. Business, "Business Overview and Strategy." In particular, with respect to strategic financial objectives, we focus our attention on the following:

- growing revenue by increasing sales generated by our Core Network Services;
- focusing on our Enterprise customers, as this customer group has the largest potential for growth;
- continually improving the customer experience to increase customer retention and reduce customer churn;
- launching new products and services to meet customer needs, in particular for enterprise customers;

- improving profitability by reducing network costs and operating expenses;
- achieving and maintaining sustainable generation of positive cash flows from operations;
- continuing to show improvement in Adjusted EBITDA (as defined in this Item below) as a percentage of revenue;
- localizing certain decision-making and interaction with our mid-market enterprise customers, including leveraging our existing network assets;
- concentrating our capital expenditures on those technologies and assets that enable us to develop our Core Network Services;
- managing Wholesale Voice Services for profit contribution; and
- refinancing our future debt maturities.

Our management continues to review all existing lines of business and service offerings to determine how they enhance our focus on the delivery of communications services and meeting our financial objectives. To the extent that certain lines of business or service offerings are not considered to be compatible with the delivery of our services or with meeting our financial objectives, we may exit those lines of business or stop offering those services in part or in whole.

We have also been focused on improving our liquidity and financial condition, and extending the maturity dates of certain debt. See Note 10 - Long-Term Debt in the notes to the Consolidated Financial Statements.

We will continue to look for opportunities to improve our financial position and focus our resources on growing revenue and managing costs for the business.

Our management reporting structure reflects the way in which we allocate resources and assess performance. Our reportable segments consist of: 1) North America; 2) EMEA; and 3) Latin America.

Total Revenue consists of:

- Core Network Services revenue from Internet Protocol ("IP") and data services; transport and fiber; local and enterprise voice services; colocation and data center services; and security services.
- Wholesale Voice Services revenue from sales of long distance voice services to wholesale customers.

Core Network Services revenue represents higher profit services and Wholesale Voice Services revenue represents lower profit services. Core Network Services revenue requires different levels of investment and focus and provides different contributions to our operating results than Wholesale Voice Services revenue. Management believes that growth in revenue from our Core Network Services is critical to the long-term success of our business. We also believe we must continue to effectively manage the profitability of the Wholesale Voice Services revenue. We believe performance in our communications business is best gauged by analyzing revenue changes in Core Network Services.

Core Network Services

IP and data services primarily include our Internet services, Virtual Private Network ("VPN"), Content Delivery Network ("CDN"), media delivery, Vyvx broadcast and Managed Services. Our IP and high speed IP service is high quality and is offered in a variety of capacities. Our VPN service permits businesses of any size to replace multiple networks with a single, cost-effective solution that greatly simplifies the converged transmission of voice, video, and data. This convergence to a single platform can be obtained without sacrificing the quality of service or security levels of traditional ATM and frame relay offerings. VPN service also permits customers to prioritize network application traffic so that high priority applications, such as voice and video, are not compromised in performance by the flow of low priority applications such as email.

Growth in transport (such as private line and wavelengths) and fiber revenue is largely dependent on increased demand for bandwidth services and available capital of companies requiring communications capacity for their own use or in providing capacity as a service provider to their customers. These expenditures may be in the form of monthly payments or, in the case of private line, wavelength or dark fiber services, either monthly payments or upfront payments. We are focused on providing end-to-end transport and fiber services to our customers to directly connect customer locations with a private network.

Voice services comprise a broad range of local and enterprise voice services using Voice over Internet Protocol ("VoIP") and traditional circuit-switch based technologies, including VoIP enhanced local service, SIP Trunking, local inbound service, Primary Rate Interface service, long distance service and toll-free service. Our voice services also include our comprehensive suite of audio, Web and video collaboration services.

Colocation and data center services allow customers to place their network equipment and servers in suitable environments maintained by us with high-speed links providing on-net access to more than 60 countries. These services are secure, redundant and flexible to fit the varying needs of our customers. Services, which vary by location, include hosting network equipment used to transport high speed data and voice over our global network; providing managed IT services, installation, maintenance, storage and monitoring of enterprise services; and providing comprehensive IT outsource solutions.

Security Services can be used to enable customers to address the growing threat of cyber-attack and allow customers to create a secure network, safeguard brand value, enable business continuity, and avoid complexity and cost. Our Security Services include: Secure Access which provides secure and encrypted connectivity for mobile users or remote offices; Cloud and Premises based Managed Firewall and Unified Threat Management Services including Intrusion Prevention and Detection service and Web Content filtering; network-based Distributed Denial of Service (DDoS) Mitigation, which protects against Internet based DDoS attacks; and Security Consulting services for Governance, Risk Management and Compliance. Security Services are sold stand-alone or in conjunction with Data Services.

We believe a source of future incremental demand for our Core Network Services will be from customers that are seeking to distribute their feature rich content or video over the Internet. Revenue growth in this area is dependent on the continued increase in demand from customers and the pricing environment. An increase in the reliability and security of information transmitted over the Internet and declines in the cost to transmit data have resulted in increased utilization of e-commerce or Web-based services by businesses. Although the pricing for data services is currently relatively stable, the IP market is generally characterized by price compression and high unit growth rates depending upon the type of service. We have continued to experience price compression in the high-speed IP and voice services markets.

The following provides a discussion of our Core Network Services revenue in terms of the enterprise and wholesale channels.

- The enterprise channel includes large, multi-national enterprises requiring large amounts of bandwidth to support their business operations, such as financial services companies, healthcare companies, content providers, and portal and search engine companies. It also includes medium-sized enterprises, regional service providers, as well as government markets, the U.S. federal government, the systems integrators supporting the U.S. federal government, U.S. state and local governments, academic consortia, and certain academic institutions.

- The wholesale channel includes revenue from incumbent and alternative carriers in each of the regions, global carriers, wireless carriers, cable companies, satellite companies and voice service providers.

We believe the alignment of Core Network Services around channels should allow us to drive growth while enabling us to better focus on the needs of our customers. Each of these channels is supported by dedicated employees in sales. Each of these channels is also supported by non-dedicated, centralized service delivery and management, product management and development, corporate marketing, global network services, engineering, information technology, and corporate functions, including legal, finance, strategy and human resources.

Wholesale Voice Services

We offer wholesale voice services that target large and existing markets. The revenue potential for wholesale voice services is large; however, pricing is expected to continue to decline over time as a result of the new low-cost IP and optical-based technologies. In addition, the market for wholesale voice services is being targeted by many competitors, several of which are larger and have more financial resources than us.

Seasonality and Fluctuations

We continue to expect business fluctuations to affect sequential quarterly trends in revenue, costs and cash flow. This includes the timing, as well as any seasonality of sales and service installations, usage, rate changes and repricing for contract renewals. Historically, our revenue and expense in the first quarter has been affected by the slowing of our customers' purchasing activities during the holidays and the resetting of payroll taxes in the new year. We conduct a portion of our business in currencies other than the U.S. dollar, the currency in which our Consolidated Financial Statements are reported. Accordingly, our operating results could also be adversely affected by foreign currency exchange rate volatility relative to the U.S. dollar. Our historical experience with quarterly fluctuations may not necessarily be indicative of future results.

Because revenue subject to billing disputes where collection is uncertain is not recognized until the dispute is resolved, the timing of dispute resolutions and settlements may positively or negatively affect our revenue in a particular quarter. The timing of disconnection may also affect our results in a particular quarter, with disconnection early in the quarter generally having a greater effect. The timing of capital and other expenditures may affect our costs or cash flow. The convergence of any of these or other factors such as fluctuations in usage, increases or decreases in certain taxes and fees or pricing declines upon contract renewals in a particular quarter may result in our revenue growing more or less than previous trends, may affect our profitability and other financial results and may not be indicative of future financial performance. We also establish appropriate reserves for disputes of incorrect network access cost billings from our suppliers of network services, which may include disputes for circuits that are not disconnected by the supplier on a timely basis, charges from suppliers for circuits that were not timely installed and incorrect rate or other inadequate information needed to determine the appropriate billing from the supplier. The network access cost reserves for disputed supplier billings are based on an analysis of our historical experience in resolving disputes with our suppliers and regulatory analysis regarding certain specific supplier billing matters. The timing and ultimate outcome of the dispute resolution process could differ from our initial estimates and these differences could be material.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, equity, revenue, expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate these estimates on an ongoing basis. Actual results may differ from these estimates under different assumptions or conditions.

While we have other accounting policies that involve estimates such as the allowance for doubtful accounts and unfavorable contracts recognized in acquisition accounting, management has identified the policies below, which require the most significant judgments and estimates to be made in the preparation of the Consolidated Financial Statements, as critical to our business operations and the understanding of our results of operations.

Revenue

Revenue is recognized monthly as the services are provided based on contractual amounts expected to be collected. Communications services are provided either on a usage basis, which can vary period to period, or at a contractually committed amount.

For certain sale and long-term indefeasible right of use ("IRU") contracts involving private line, wavelengths and dark fiber services, we may receive upfront payments for services to be delivered for a period of up to 25 years. In these situations, we defer the revenue and amortize it on a straight-line basis to earnings over the term of the contract.

Termination revenue is recognized when a customer disconnects service prior to the end of the contract period and for which we had previously received consideration and for which revenue recognition was deferred. Termination revenue is also recognized when customers make termination penalty payments to us to settle contractually committed purchase amounts that the customer no longer expects to meet or when a customer renegotiates a contract with us under which we are no longer obligated to provide product or services for consideration previously received and for which revenue recognition has been deferred. Termination revenue is reported in the same manner as the original product or service provided.

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers, which amended the existing accounting standards for revenue recognition and requires an entity to recognize the amount of revenue it expects to be entitled to for the transfer of promised goods or services to customers. The ASU and subsequent amendments have been codified as ASC 606, *Revenue from Contracts with Customers* (“ASC 606”). In July 2015, the FASB deferred the effective date to annual reporting periods beginning after December 15, 2017, and interim reporting periods within those periods. Early adoption is permitted using the original effective date of annual reporting periods beginning after December 15, 2016, and interim reporting periods within those periods. The new guidance may be applied retrospectively to each prior period presented or prospectively with the cumulative effect recognized as of the date of initial adoption. We will not adopt ASC 606 early.

We are performing a comprehensive analysis of our revenue streams and contractual arrangements to identify the effects of ASC 606 on our consolidated financial statements and are developing new accounting and reporting policies, business and internal control processes and procedures to facilitate adoption of the standard. Because we currently have service contracts that contain a significant financing component that are not currently separately accounted for, we will be required to estimate and record incremental revenue and interest cost associated with these contractual terms. In addition, we will be required to capitalize, and subsequently amortize, commission costs associated with obtaining or fulfilling our customer contracts, which we do not currently defer and amortize. We will also have to comply with new revenue disclosure requirements. We are continuing to review and evaluate underlying contract information that will be used to support new accounting and disclosure requirements under ASC 606 and evaluate other matters that may result from adoption of the standard. We have not yet selected a transition method, as our method of transition may be affected by the CenturyLink Merger, which we expect will be completed in the third quarter of 2017, and subsequent integration activities completed prior to the January 1, 2018 ASC 606 adoption date.

Revenue Reserves

We establish appropriate revenue reserves at the time services are rendered based on an analysis of historical credit activity to address, where significant, situations in which collection is not reasonably assured as a result of credit risk, potential billing disputes or other reasons. Our significant estimates are based on assumptions and other considerations, including payment history, credit ratings, customer financial performance and history of billing disputes.

Network Access Cost Reserves

We dispute incorrect billings from our suppliers of network services. The most prevalent types of disputes include disputes for circuits that are not disconnected by the supplier on a timely basis, charges from suppliers for circuits that were not timely installed and incorrect rate or other inadequate information needed to determine the appropriate billing from the supplier. Depending on the type and complexity of the issues involved, it may and often does take several quarters to resolve the disputes. We establish appropriate network access cost reserves for disputed supplier billings based on an analysis of our historical experience in resolving disputes with our suppliers and regulatory analysis regarding certain supplier billing matters. Judgment is required in estimating the ultimate outcome of the dispute resolution process, as well as any other amounts that may be incurred to conclude the negotiations or settle any litigation. Actual results may differ from these estimates under different assumptions or conditions and such differences could be material.

Valuation of Long-Lived Assets

We perform an assessment of our long-lived assets, including finite-lived intangible assets, for impairment when events or changes in circumstances indicate that the carrying value of assets or asset groupings may not be recoverable. This review requires the identification of the lowest level of identifiable cash flows for purposes of grouping assets subject to review. The estimate of undiscounted cash flows includes long-term forecasts of revenue growth and operating expenses. All of these items require significant judgment and assumptions. An impairment loss may exist when the estimated undiscounted cash flows attributable to the assets are less than their carrying amount. If an asset is deemed to be impaired, the amount of the impairment loss recognized represents the excess of the long-lived asset's carrying value as compared to its estimated fair value, based on management's assumptions and projections.

We conducted a long-lived asset impairment analysis in the fourth quarter of 2016 and 2015 and in each case concluded that our long-lived assets, including our finite-lived intangible assets, were not impaired. To the extent that future changes in assumptions and estimates cause a change in estimates of future cash flows that indicate the carrying amount of our long-lived assets, including finite-lived intangible assets, may not be recoverable, we may incur impairment charges in the future to write-down the carrying amount of our long-lived assets to their estimated fair value.

Useful Lives of Long-Lived Assets

We perform internal reviews to evaluate the depreciable lives of our property, plant and equipment annually or more frequently if new facts and circumstances arise that may affect management's original estimates. Due to the rapid changes in technology and the competitive environment, selecting the estimated economic life of telecommunications property, plant, and equipment requires a significant amount of judgment. Our internal reviews take into account input from our global engineering and network services personnel, actual usage, the physical condition of our property, plant, and equipment, industry data, and other relevant factors.

Goodwill and Indefinite-Lived Intangible Assets

We perform an annual impairment assessment of our goodwill and intangible assets with indefinite useful lives during the fourth quarter, or more frequently if we determine that indicators of impairment exist. Our impairment review process considers the fair value of each reporting unit relative to its carrying value. We assess the fair value of each of our reporting units using an income approach (also known as a discounted cash flow) and a market multiple approach. The income approach utilizes cash flow projections discounted using an appropriate Weighted Average Cost of Capital (WACC) rate for each reporting unit. The market multiple approach uses a multiple of a company’s Earnings Before Interest, Taxes, and Depreciation and Amortization expenses (EBITDA).

If the fair value of the reporting unit exceeds its carrying value, goodwill is not impaired and no further testing is performed. If the carrying value of the reporting unit exceeds its fair value, then a second step must be performed, and the implied fair value of the reporting unit's goodwill must be determined and compared to the carrying value of the reporting unit's goodwill. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, then an impairment loss equal to the difference will be recorded. In accordance with applicable accounting guidance, prior to performing the two step evaluation, an assessment of qualitative factors may be performed to determine whether it is more likely than not that the fair value of a reporting unit exceeds the carrying value. If it is determined that it is unlikely that the carrying value exceeds the fair value, we are not required to complete the two step goodwill impairment evaluation. The selection and assessment of qualitative factors used to determine whether it is more likely than not that the fair value of a reporting unit exceeds the carrying value involves significant judgment.

In 2016 , our reporting units consisted of our three regional operating units in: North America; Europe, the Middle East and Africa ("EMEA"); and Latin America. Goodwill assigned to the North America, EMEA and Latin America reporting units at December 31, 2016 totaled $7.729 billion and was $7.024 billion , $109 million and $596 million , respectively. Goodwill assigned to the North America, EMEA and Latin America reporting units at December 31, 2015 totaled $7.749 billion and was $7.024 billion , $129 million and $596 million , respectively.

In 2016 , we conducted our qualitative goodwill impairment analysis and determined that it was more likely than not that the fair value of our reporting units exceeded the carrying value and concluded that goodwill was not impaired. As a result, we did not perform the two step goodwill impairment evaluation. In 2015, as a result of the deconsolidation of our Venezuelan subsidiary, we completed an assessment of the Latin American and other reporting units' goodwill as of September 30, 2015 and concluded there was no impairment in 2015.

To the extent that future changes in our assumptions and estimates cause a change in the related fair value estimates that indicate the carrying amount of our goodwill may exceed its fair value, we may incur impairment charges in the future to write-down the carrying amount of our goodwill to its estimated fair value.

Our indefinite-lived intangible assets impairment review process compares the estimated fair value of the indefinite-lived intangible assets to their respective carrying values. If the fair value of the indefinite-lived intangible assets exceeds their carrying values, then the indefinite-lived intangible assets are not impaired. If the carrying value of the indefinite-lived intangible assets exceeds their fair value, then an impairment loss equal to the difference will be recorded. In accordance with applicable accounting standards, an entity may assess qualitative factors to determine whether it is more likely than not that the fair value exceeds the carrying value prior to performing the evaluation. If it is determined that it is unlikely the carrying value exceeds the fair value, then the entity is not required to perform the indefinite-lived intangible assets impairment evaluation.

During the fourth quarter of 2016 and 2015 , we conducted our indefinite-lived intangible assets impairment analysis and concluded that there was no impairment in 2016 and 2015 .

Assessment of Loss Contingencies

We have legal, tax and other contingencies that could result in significant losses upon the ultimate resolution of such contingencies. We have provided for losses in situations where we have concluded that it is probable that a loss has been incurred and the amount of the loss is reasonably estimable. Further, with respect to loss contingencies, where it is probable that a liability has been incurred and there is a range in the expected loss and no amount in the range is more likely than any other amount, we accrue at the low end of the range. A significant amount of judgment is involved in determining whether a loss is probable and reasonably estimable due to the uncertainty involved in predicting the likelihood of future events and estimating the financial impact of such events. Accordingly, it is possible that upon the further development or resolution of a contingent matter, a significant charge could be recorded in a future period related to an existing contingent matter. For additional information, see Note 15 - Commitments, Contingencies And Other Items in the notes to the Consolidated Financial Statements.

Business Combinations

The accounting guidance for business combinations requires an acquiring entity to recognize all of the assets acquired and liabilities assumed at the acquisition date fair value. The allocation of the purchase price to the assets acquired and liabilities assumed from an acquisition, and the related estimated lives of depreciable and amortizable tangible and identifiable intangible assets, require a significant amount of judgment and is considered a critical estimate. Such allocation of certain aspects of the purchase price to items that are more complex to value is performed by management, taking into consideration information provided to management by an independent valuation firm.

Income Taxes

We recognize deferred tax assets and liabilities for our United States and non-U.S. operations, for operating loss and other credit carry forwards and the expected tax consequences of temporary differences between the tax basis of assets and liabilities and their reported amounts using enacted tax rates in effect for the year the differences are expected to reverse. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible.

The evaluation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in our financial statements or tax returns, and future profitability by tax jurisdiction. We have historically provided a valuation allowance to reduce our U.S. federal, state and non-U.S. deferred tax assets to the amount that is more likely than not to be realized; however, in the fourth quarter 2015, we released the majority of our valuation allowance against our U.S. federal and state deferred tax assets, resulting in a non-cash benefit to income tax expense of approximately $3.3 billion, $3.1 billion of which was related to future taxable earnings.

Given our current level of pre-tax income, and assuming we maintain into the future this current level of pre-tax income at a minimum, we expect to generate income before taxes in the United States in future periods at a level that would fully utilize our U.S. federal and the majority of our state net operating loss carryforward balances. We continue to maintain a valuation allowance of approximately $0.9 billion as of December 31, 2016, against net deferred tax assets, primarily in non-U.S. and certain of our state jurisdictions where we do not currently believe the realization of our deferred tax assets is more likely than not.

We evaluate our deferred tax assets quarterly to determine whether adjustments to the valuation allowance are appropriate in light of changes in facts or circumstances, such as changes in expected future pre-tax earnings, tax law, interactions with taxing authorities and developments in case law. In making this evaluation, we rely on our recent history of pre-tax earnings. Our material assumptions are our forecasts of future pre-tax earnings and the nature and timing of future deductions and income represented by the deferred tax assets and liabilities, all of which involve the exercise of significant judgment.

We had a valuation allowance on many of our non-U.S. jurisdictions as of December 31, 2016. We monitor our cumulative loss position in these non-U.S. jurisdictions and other evidence each quarter to determine the appropriateness of our valuation allowance. In 2016 we had an $82 million income tax benefit related to the release of deferred tax valuation allowances primarily in Germany, Brazil, and Mexico. The determinations to release the foreign valuation allowances were driven by our projection of future profitability for each legal entity due to the recapitalization of our German subsidiary, the planned action to restructure our Brazilian business, and the merger of our Mexican subsidiaries.

With respect to our foreign branches, we had historically established deferred tax liabilities for foreign branches with an overall cumulative translation gain, but had not established deferred tax assets for those with an overall translation loss as we had no plans to trigger realization of the losses in the foreseeable future. On December 7, 2016, the Internal Revenue Service issued new regulations under Internal Revenue Code Section 987 addressing the taxation of foreign currency translation gains and losses arising from foreign branches. The new regulations require a “fresh start” recalculation of the unrealized gains and losses as of the adoption date. The regulations provide that the tax bases of specified assets, such as fixed assets, will be translated at historic foreign exchange rates. As a result, the deferred taxes related to such foreign currency translation are expected to reverse through the operations of the branch thereby allowing the recognition of deferred tax assets arising from translation losses as well. The issuance of the regulations resulted in us recognizing an estimated one-time income tax benefit of $110 million during the fourth quarter 2016.

Although we believe our estimates are reasonable, the ultimate determination of the appropriate amount of valuation allowance, as well as the effect of recently issued tax regulations addressing the complex area of foreign currency translation involves significant judgment.

Results of Operations 2016 vs. 2015 and 2015 vs. 2014

Year Ended December 31, (dollars in millions)	2016	2015	2014
Revenue	$ 8,172	$ 8,229	$ 6,777
Network access costs	2,725	2,833	2,529
Network related expenses	1,346	1,432	1,246
Depreciation and amortization	1,250	1,166	808
Selling, general and administrative expenses	1,407	1,467	1,181
Total Costs and Expenses	6,728	6,898	5,764
Operating Income	1,444	1,331	1,013
Other Income (Expense):			
Interest income	4	1	1
Interest expense	(546)	(642)	(654)
Loss on modification and extinguishment of debt	(40)	(218)	(53)
Venezuela deconsolidation charge	—	(171)	—
Other, net	(20)	(18)	(69)
Total Other Expense	(602)	(1,048)	(775)
Income Before Income Taxes	842	283	238
Income Tax (Expense) Benefit	(165)	3,150	76
Net Income	$ 677	$ 3,433	$ 314

Discussion of all significant variances:

Revenue by Channel:

Year Ended December 31, (dollars in millions)	2016	2015	2014
Core Network Services Revenue:			
North America - Wholesale Channel	$ 1,694	$ 1,746	$ 1,472
North America - Enterprise Channel	4,668	4,461	3,048
EMEA - Wholesale Channel	247	278	334
EMEA - Enterprise Channel	497	557	570
Latin America - Wholesale Channel	147	182	217
Latin America - Enterprise Channel	514	533	567
Total Core Network Services Revenue	7,767	7,757	6,208
Wholesale Voice Services	405	472	569
Total Revenue	$ 8,172	$ 8,229	$ 6,777

Revenue by Service Offering:

Year Ended December 31, **(dollars in millions)**	**2016**	**2015**	**2014**
Core Network Services Revenue:			
Colocation and Datacenter Services	$ 604	$ 606	$ 590
Transport and Fiber	2,308	2,350	2,087
IP and Data Services	3,659	3,589	2,530
Voice Services (Local and Enterprise)	1,196	1,212	988
Total Core Network Services Revenue	7,767	7,757	6,195
Wholesale Voice Services	405	472	582
Total Revenue	$ 8,172	$ 8,229	$ 6,777

Revenue decreased 1% in 2016 compared to 2015 and increased 21% in 2015 compared to 2014 . Core Network Services revenue remained essentially flat at $7.767 billion in 2016 compared to $7.757 billion in 2015, although enterprise channel revenue increased $128 million, partially offset by a $118 million decrease in wholesale channel revenue.

Enterprise channel revenue increased $207 million in North America in 2016 compared to 2015, primarily due to growth in VPN services and wavelengths services provided to enterprise customers. This growth was partially offset by Latin America, where enterprise channel revenue declined $19 million, primarily due to the effect of the September 30, 2015 deconsolidation of our Venezuelan subsidiary with $57 million of enterprise channel revenue and the strengthening of the U.S. dollar against Latin American currencies in 2016 compared to the exchange rates in 2015, partially offset by an increase in enterprise channel revenue of $37 million, due largely to growth in IP, wavelengths, and VPN services to enterprise customers. Enterprise channel revenue in EMEA decreased $60 million compared to 2015, primarily due to the effect of the stronger U.S. dollar against European currencies and decreased U.K. Government revenue.

Wholesale channel revenue decreased $52 million in North America in 2016 compared to 2015 primarily due to a decline in private line and IP services, partially offset by VPN, dark fiber and wavelengths services growth. Latin America wholesale channel revenue decreased $35 million in 2016, primarily due to the effect of the September 30, 2015 deconsolidation of our Venezuelan subsidiary of $15 million, in addition to a decrease in IP and data services, VPN, and private line services. EMEA wholesale channel revenue decreased $31 million primarily due to certain large disconnects and the strengthening of the U.S. dollar against local currencies in 2016 compared to exchange rates in 2015. Wholesale channel revenue continued to be affected by industry consolidation across all regions.

From a service and product offering perspective, we continued to grow our IP and data services by $70 million in 2016 compared to 2015, driven primarily by an increase in VPN services of $118 million, CDN services of $18 million and managed services of $13 million. These increases were partially offset by the effect of the September 30, 2015 deconsolidation of our Venezuelan subsidiary of $47 million and the strengthening of the U.S. dollar against local currencies in 2016 compared to the exchange rates in 2015 of $34 million. Transport and fiber decreased by $42 million, primarily due to a decrease in private line of $123 million, the effect of the September 30, 2015 deconsolidation of our Venezuelan subsidiary of $14 million, and the strengthening of the U.S. dollar against local currencies in 2016 compared to the exchange rates in 2015 of $12 million, partially offset by increases in wavelengths services of $76 million and dark fiber services of $30 million. Voice services decreased by $16 million, primarily due to the decrease of intercarrier compensation for voice services of $14 million, the strengthening of the U.S. dollar against local currencies in 2016 compared to the exchange rates in 2015 of $11 million, the decrease of collaboration services of $7 million, partially offset by the increase in voice services by $16 million. Colocation and datacenter services decreased by $2 million, primarily due to the effect of the September 30, 2015 deconsolidation of our Venezuelan subsidiary of $11 million and the strengthening of the U.S. dollar against local currencies in 2016 compared to the exchange rates in 2015 of $8 million, partially offset by growth in managed security services, data center, and colocation services.

Wholesale Voice Services revenue decreased in all regions in 2016 compared to 2015, primarily due to competitive pressures caused by industry consolidation and our focus on maintaining or growing Wholesale Voice Services profitability.

The increase in total revenue in 2015 compared to 2014 was primarily driven by a full year of additional revenue in 2015 associated with acquisition of tw telecom in the fourth quarter of 2014, compared to $285 million representing two months of revenue from the tw telecom acquisition included in the 2014 results. Assuming the tw telecom revenue was included for the full year of 2014, the total revenue would have increased from $8.123 billion in 2014 to $8.229 billion in 2015, or a 1% increase (see Note 3 - Events Associated with the Acquisition of tw telecom inc. in the Notes to the Consolidated Financial Statements). This increase was primarily driven by enterprise channel growth of $313 million in North America, offset by declines in Latin America revenue of $69 million and EMEA revenue of $69 million primarily due to the strengthening of the U.S. dollar against local currencies in 2015, declines of $99 million in Wholesale Voice Services revenue and the effect of the deconsolidation of our Venezuelan subsidiary as of September 30, 2015.

We experienced continued growth in our IP and data services of $1.056 billion, transport and fiber services of $258 million and voice services of $233 million during 2015 compared to 2014 driven primarily by the acquisition of tw telecom and end user customer demand for VPN and bandwidth in the enterprise channel. The increase in IP and data services was predominantly driven by our VPN and managed services and revenue from the tw telecom acquisition. We also experienced increases in transport and fiber driven by dark fiber, wavelengths and professional services and in colocation and datacenter services and voice services, which also benefited from the tw telecom acquisition, offset by the adverse effect of weakening currencies in EMEA and Latin America against the U.S. dollar.

Core Network Services revenue increased in the North America region in 2015 compared to 2014 as a result of the full year of results from the tw telecom acquisition and growth in services provided to the existing enterprise customer base. These increases were partially offset by decreases in EMEA and Latin America for 2015 due to the appreciation of the U.S. dollar against currencies in EMEA and Latin America.

Wholesale Voice Services revenue decreased in all regions in 2015 compared to 2014. In 2015 compared to 2014, Wholesales Voice Services revenue decreased in North America and EMEA and remained flat in Latin America. The changes during the periods are primarily due to competitive pressures and our focus on maintaining Wholesale Voice Services profitability.

Network Access Costs include leased capacity, right-of-way costs, access charges, satellite transponder lease costs and other third party costs directly attributable to providing access to customer locations from our network, but excludes Network Related Expenses, and depreciation and amortization. Network Access Costs do not include any employee expenses or impairment expenses; these expenses are allocated to Network Related Expenses or Selling, General and Administrative Expenses.

Network Access Costs as a percentage of total revenue was 33% in 2016 compared to 34% in 2015 and 37% in 2014 . The decrease is primarily due to an improving mix of higher profit on-net Core Network Services and a decline in lower profit Wholesale Voice Services. Additionally, we continue to implement initiatives to reduce both fixed and variable network access costs, which resulted in a decrease in Network Access Costs.

Network Related Expenses include certain expenses associated with the delivery of services to customers and the operation and maintenance of our network, such as facility rent, utilities, maintenance and other costs, each related to the operation of our communications network, as well as salaries, wages and related benefits (including non-cash stock-based compensation expenses) associated with personnel who are responsible for the delivery of services, operation and maintenance of our communications network, and accretion expense on asset retirement obligations, but excludes depreciation and amortization.

Network Related Expenses decreased 6% in 2016 from 2015 and increased 15% in 2015 from 2014 . The decrease in 2016 compared to 2015 was primarily related to decreased employee related expense of $46 million and a decrease in facilities and network based expenses of $27 million as we continued to optimize our workforce and facilities. Additionally, in the third quarter of 2015, we implemented certain workforce reductions, resulting in approximately $8 million of restructuring charges recorded in Network Related Expenses.

The increase in 2015 compared to 2014 was primarily related to an increase in employee related expense of $106 million and an increase in facilities and rent expense of $62 million resulting from the acquisition of tw telecom. Additionally, in the third quarter of 2015, we implemented certain workforce reductions, resulting in approximately $8 million of restructuring charges recorded in Network Related Expenses.

Depreciation and Amortization expense increased 7% in 2016 from 2015 and increased 44% in 2015 from 2014 . The increase in 2016 compared to 2015 is primarily related to $101 million of depreciation and amortization charges associated with additional capital expenditures, net of fully depreciated assets, partially offset by $17 million of foreign currency exchange rate changes in EMEA and Latin America. The increase in 2015 compared to 2014 is primarily attributable to $312 million of depreciation and amortization charges associated with the assets acquired from tw telecom and increased capital expenditures, partially offset by the impact of foreign currency exchange rate changes in EMEA and Latin America of $17 million.

Selling, General and Administrative Expenses ("SG&A Expenses") includes the salaries, wages and related benefits (including non-cash stock-based compensation expenses) and the related costs of corporate and sales personnel, travel, insurance, non-network related rent, advertising, and other administrative expenses.

SG&A Expenses decreased 4% in 2016 compared to 2015 and increased 24% in 2015 compared to 2014 . The decrease in 2016 was primarily related to decreased employee-related expenses of $24 million as we continued to drive greater operational efficiencies, as well as lower other tax of $7 million and a decrease in bad debt expense of $5 million. In 2016 we also released an accrual for an assessment of $12 million and associated interest of $14 million corresponding to certain Peruvian tax litigation. See Note 15 — Commitments, Contingencies and Other Items in the notes to Consolidated Financial Statements for additional information. Additionally, in the third quarter of 2015, we implemented certain workforce reductions, resulting in approximately $16 million of restructuring charges recorded in SG&A expenses. These decreases were partially offset by an increase in non-cash stock-based compensation of $13 million in 2016 compared to 2015. The increase in 2015 compared to 2014 was primarily related to $199 million of additional employee related expenses and an increase in professional services and non-network rent of $51 million, primarily associated with the acquisition of tw telecom, partially offset by a decrease of $18 million in restructuring charges from $34 million in 2014. We incurred $32 million and $81 million in expenses related to the acquisition of tw telecom in 2015 and 2014, respectively.

Non-cash, stock-based compensation expense of $156 million , $141 million and $73 million was recorded in 2016 , 2015 and 2014 , respectively, related to outperform stock appreciation rights, performance restricted stock units ("PRSUs"), restricted stock units, incentive and retention plans and shares issued for our matching contribution to the 401(k) plan. Approximately $134 million , $121 million and $64 million of non-cash stock-based compensation expense was recorded in SG&A Expenses in 2016 , 2015 and 2014 , respectively, and $22 million , $20 million and $9 million was recorded in Network Related Expenses in 2016 , 2015 and 2014 , respectively. The increase in 2016 compared to 2015 was primarily due to additional grants of restricted stock units and performance stock units, partially offset by decreased expense due to a 2015 change in retirement eligibility, which accelerated the expensing of awards for certain retirement eligible personnel in 2015, and outperform stock appreciation right awards reaching full amortization by the third quarter of 2016. The increase in 2015 compared to 2014 was primarily related to additional grants of restricted stock units, PRSUs, and increased matching contributions for our 401(k) plan due to the additional headcount from the tw telecom acquisition.

Adjusted EBITDA , as defined by us, is net income (loss) from the Consolidated Statements of Income before (1) income tax benefit (expense), (2) total other income (expense), (3) non-cash impairment charges included within selling, general and administrative expenses and network related expenses, (4) depreciation and amortization expense and (5) non-cash stock-based compensation expense included within selling, general and administrative expenses and network related expenses and (6) discontinued operations.

Adjusted EBITDA is not a measurement under generally accepted accounting principles ("GAAP") and may not be used in the same way by other companies. We believe that Adjusted EBITDA is an important part of our internal reporting and is a key measure used by us to evaluate our profitability and operating performance and to make resource allocation decisions. We believe such measurement is especially important in a capital-intensive industry such as telecommunications. We also use Adjusted EBITDA to compare our performance to that of our competitors and to eliminate certain non-cash and non-operating items in order to consistently measure from period to period our ability to fund capital expenditures, fund growth, service debt and determine bonuses.

Adjusted EBITDA excludes non-cash impairment charges and non-cash stock-based compensation expense because of the non-cash nature of these items. Adjusted EBITDA also excludes interest income, interest expense and income tax benefit (expense) because these items are associated with our capitalization and tax structures. Adjusted EBITDA also excludes depreciation and amortization expense because these non-cash expenses reflect the effect of capital investments which we believe are better evaluated through cash flow measures. Adjusted EBITDA excludes net other income (expense) because these items are not related to our primary operations.

There are limitations to using non-GAAP financial measures such as Adjusted EBITDA, including the difficulty associated with comparing companies that use similar performance measures whose calculations may differ from our calculations. Additionally, this financial measure does not include certain significant items such as interest income, interest expense, income tax benefit (expense), depreciation and amortization expense, non-cash impairment charges, non-cash stock-based compensation expense and net other income (expense). Adjusted EBITDA should not be considered a substitute for other measures of financial performance reported in accordance with GAAP.

The following information provides a reconciliation of Net Income to Adjusted EBITDA as defined by us along with Adjusted EBITDA by reportable segment:

	Year Ended December 31,		
(dollars in millions)	**2016**	**2015**	**2014**
Net Income	$ 677	$ 3,433	$ 314
Income Tax Expense (Benefit)	165	(3,150)	(76)
Total Other Expense	602	1,048	775
Depreciation and amortization	1,250	1,166	808
Non-Cash Stock Compensation Attributable to Stock Awards	156	141	73
Non-Cash Impairment	—	—	1
Adjusted EBITDA	$ 2,850	$ 2,638	$ 1,895
North America	$ 3,220	$ 3,048	$ 2,065
EMEA	215	235	214
Latin America	293	302	348
Unallocated Corporate Expenses	(878)	(947)	(732)
Adjusted EBITDA	$ 2,850	$ 2,638	$ 1,895

Adjusted EBITDA was $2.850 billion in 2016 compared with $2.638 billion in 2015 and $1.895 billion in 2014 . The increase in Adjusted EBITDA is attributable to growth in our higher incremental profit Core Network Services revenue and continued improvements in network access costs as a percentage of revenue and lower network related and SG&A Expenses, partially offset by lower wholesale voice revenue and the September 30, 2015 deconsolidation of our Venezuelan subsidiary, which had Adjusted EBITDA of $46 million for the nine months ended September 30, 2015. See Note 14 — Segment Information in the notes to Consolidated Financial Statements for additional information on Adjusted EBITDA by region.

Adjusted EBITDA increased $172 million in the North America region in 2016 compared to 2015, primarily due to increased Core Network Services revenue of $155 million partially offset by Wholesale Voice Services revenue, as discussed further above, and initiatives resulting in reduced fixed and variable network access costs. Network access costs decreased $53 million in 2016 compared to 2015.

Adjusted EBITDA decreased $20 million in the EMEA region in 2016 compared to 2015 as a result of the $91 million decrease in Core Network Services revenue in 2016, partially offset by reduced employee related expenses of $7 million and a $25 million reduction in network related expenses, as discussed further above. EMEA Adjusted EBITDA was favorably affected by initiatives that reduced fixed and variable network access costs. Network access costs in EMEA decreased $39 million in 2016 compared to 2015.

Adjusted EBITDA decreased $9 million in the Latin American region in 2016 compared to 2015, primarily as a result of the $46 million decrease from the deconsolidation of our Venezuelan subsidiary on September 30, 2015, partially offset by reduced employee related expenses and other SG&A expenses of $29 million, reduced network access costs of $4 million, and reduced network related expenses of $4 million, as discussed further above. Adjusted EBITDA was favorably affected by initiatives that reduced fixed and variable network access costs.

Adjusted EBITDA increased in the North America region in 2015 compared to 2014 primarily as a result of the tw telecom acquisition, growth in Core Network Services revenue and initiatives resulting in reduced network access costs.

Adjusted EBITDA increased in the EMEA region in 2015 compared to 2014 as a result of initiatives that reduced network access costs, which were partially offset by the effect of the stronger U.S. dollar against European currencies. Adjusted EBITDA for 2015 was negatively affected by approximately 1% versus the comparable prior period as a result of the changes in foreign currency rates.

Adjusted EBITDA decreased in the Latin American region in 2015 compared to 2014 primarily as a result of the effect of the stronger U.S. dollar against Latin American currencies. Adjusted EBITDA for 2015 was negatively affected by approximately 2% versus the comparable prior period, as a result of the changes in foreign currency rates. The decrease was partially offset by initiatives resulting in reduced network access costs.

Interest Expense decreased $96 million in 2016 from 2015 and decreased $12 million in 2015 from 2014 . The decrease in 2016 compared to 2015 is due to a lower weighted average interest cost of debt of 4.7% at December 31, 2016 compared to 4.9% at December 31, 2015 due to refinancing activities. Interest expense decreased in 2015 compared to 2014 by $72 million due to a lower weighted average interest cost of debt of 4.9% at December 31, 2015 compared to 5.9% at December 31, 2014 due to refinancing activities and a $30 million reduction in interest expense as a result of the conversion of the 7% Convertible Senior Notes due 2015 and 7% Convertible Senior Notes due 2015, Series B into common stock, partially offset by $89 million of interest expense on additional borrowings used to fund the tw telecom acquisition.

Approximately 55% of our long-term debt is subject to variable interest rates and therefore subject to market risks arising from changes in interest rates. As of December 31, 2016 we expect annual interest expense in 2017 to approximate $570 million based on current interest rates on our debt outstanding as of December 31, 2016 . See Note 10 - Long-Term Debt in the notes to Consolidated Financial Statements for additional information on our financing activities.

Loss on Modification and Extinguishment of Debt was $40 million in 2016 compared to a loss of $218 million in 2015 and a loss of $53 million in 2014 . See Note 10 - Long-Term Debt in the notes to the Consolidated Financial Statements for more details regarding our financing activities.

In the second quarter of 2016, we recorded a charge of approximately $40 million related to the April 2016 redemption of the 7% Senior Notes due 2020.

The loss recorded during 2015 was related to a charge of approximately $36 million related to the redemption of the 9.375% Senior Notes due 2019 in April 2015, $100 million related to the redemptions of the 8.125% Senior Notes due 2019 and 8.875% Senior Notes due 2019 in April 2015, $27 million related to the refinancing of the $2 billion senior secured Tranche B Team Loan due 2022 in May 2015 and $55 million related to the redemption of the 8.625% Senior Notes due 2020.

The loss recorded during 2014 was related to the refinancing of the 11.875% Senior Notes due 2019.

Other, net is primarily comprised of gains and losses on the sale of non-operating assets, foreign currency gains and losses and other income and expense.

(dollars in millions)	Year Ended December 31, 2016	2015	2014
(Gain) Loss on Sale of Property, Plant, and Equipment and Other Assets	$ (2)	$ 1	$ (3)
Foreign Currency Loss related to Venezuela	—	11	43
Other Foreign Currency Loss	31	18	18
Impairment	—	—	17
Other Income	(9)	(12)	(6)
Other, net	$ 20	$ 18	$ 69

The Other, net expense in 2016 and 2015 was incurred primarily due to foreign currency losses attributable to the appreciation of the U.S. dollar for certain intercompany balances denominated in the local currency of foreign subsidiaries in North America, EMEA and Latin America that are not considered to be long-term in nature.

Other, net expense in 2014 is primarily due to foreign currency fluctuations of local currencies relative to the U.S. dollar, including foreign currency losses attributable to the devaluation of the Venezuelan bolivar as discussed below, and the partial impairment of our indefinite-lived intangible asset, partially offset by net foreign currency gains.

During the first quarter of 2014, the Venezuelan government enacted additional changes to the country's foreign exchange system. The government expanded the types of transactions that may be allowed via the weekly auctions under the Complementary System of Foreign Currency Acquirement ("SICAD 1"). The Venezuelan government also announced the replacement of its existing foreign currency administration with the National Center for Foreign Commerce ("CENCOEX"). At that time, entities could seek approval to transact through CENCOEX at the official rate of 6.30 Venezuelan bolivars to the U.S. dollar; however, certain transactions could be approved at the latest SICAD 1 rate, depending on the entity's facts and circumstances.

During the second quarter of 2014, based on additional experience with the new foreign exchange mechanisms, we concluded that the most appropriate rate was SICAD 1. Accordingly, we recognized a loss of approximately $34 million in 2014, resulting from the devaluation of Venezuelan bolivar denominated monetary assets and liabilities from the official rate of 6.3 to the SICAD 1 rate. Based upon the further deterioration of the SICAD rate from 10.6 as of June 30, 2014 to 12.0 as of September 30, 2014, we recognized an additional loss of approximately $7 million in the third quarter of 2014. As of December 31, 2014, SICAD 1 was 12.0 Venezuelan bolivars to the U.S. dollar.

During the second quarter of 2015, we recognized a charge of $6 million related to the devaluation of the Venezuelan SICAD I exchange rate from 12.0 bolivars to the U.S. dollar to 12.8 bolivars to the U.S. dollar at June 30, 2015.

During the third quarter of 2015 prior to deconsolidation, we recognized a charge of $5 million related to the devaluation of the Venezuelan SICAD I exchange rate from 12.8 bolivars to the U.S. dollar to 13.5 bolivars to the U.S. dollar effective September 1, 2015.

Income Tax (Expense) Benefit was $165 million of expense in 2016 compared to $3.150 billion of benefit in 2015 and $76 million of benefit in 2014. Income tax expense for the year ended December 31, 2016 includes an estimated one-time $110 million income tax benefit related to the issuance of new regulations under Internal Revenue Code Section 987 addressing the taxation of foreign currency translation gains and losses arising from foreign branches, an $82 million income tax benefit related to the release of deferred tax valuation allowances primarily in Germany, Brazil, and Mexico, and a $22 million benefit from the vesting of stock based compensation due to the adoption of ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting* , offset by income tax expense associated with current year taxable earnings and $24 million income tax expense related to income tax rate changes. The determinations to release the foreign valuation allowances were driven by our projection of future profitability for each legal entity due to the recapitalization of our German subsidiary, the planned action to restructure our Brazilian business, and the merger of our Mexican subsidiaries. Our effective tax rate is lower than the statutory rate primarily due to the benefit related to the issuance of new regulations under Internal Revenue Code Section 987, the income tax benefit on the foreign valuation allowance releases, and the adoption of ASU 2016-09, partially offset by limitations on certain deductions, the inability to recognize tax benefits on losses incurred in certain jurisdictions due to maintenance of valuation allowances against deferred taxes in those jurisdictions, as well as, other discrete items such as enacted tax rate changes.

During the fourth quarter of 2015, we released approximately $3.3 billion of our deferred tax valuation allowance related to our business in the United States . Income tax expense in prior periods was primarily related to taxes in foreign jurisdictions. In making the determination to release the valuation allowance against U.S. federal and state deferred tax assets, we took into consideration our movement into a cumulative income position for the most recent three-year period, including pro forma adjustments for acquired entities, our eight out of nine consecutive quarters of pre-tax operating income, and forecasts of future earnings for our U.S. business. The release was reflected as an income tax benefit in 2015.

During the fourth quarter of 2014, we released approximately $100 million of deferred tax valuation allowance primarily related to our business in the United Kingdom due to a recapitalization and consolidation of legal entities whereby one U.K. entity with a full valuation allowance was merged with an entity that had no valuation allowance against its deferred tax assets, as we had an expectation of future taxable income for the combined entities. The release was reflected as an income tax benefit in 2014.

We incur tax expense attributable to income in the U.S. and in various subsidiaries that are required to file state or foreign income tax returns on a separate legal entity basis. We also recognize accrued interest and penalties in income tax expense related to uncertain tax benefits. Our tax rate is volatile and may move up or down with changes in, among other things, the amount and source of income or loss, our ability to utilize foreign tax credits, changes in tax laws, our deferred tax valuation allowance, and the movement of liabilities established for uncertain tax positions as statutes of limitations expire or positions are otherwise effectively settled.

Venezuela Effects

Effective September 30, 2015, we deconsolidated our Venezuelan subsidiary from our consolidated financial statements. Despite the deconsolidation of our Venezuelan subsidiary, we continue to wholly own our Venezuelan subsidiary, operate in the region and remain committed to serving our Venezuelan customers. We deem it appropriate to continue to deconsolidate Venezuela.

There are a number of currency and other operating controls and restrictions in Venezuela, which have evolved over time and may continue to evolve in the future. These evolving conditions have resulted in an other-than-temporary lack of exchangeability between the Venezuelan bolivar and U.S. dollar, and have restricted our Venezuelan operations' ability to pay dividends and settle intercompany obligations in U.S. dollars. The severe currency controls imposed by the Venezuelan government have significantly limited the ability to realize the benefits from earnings of our Venezuelan operations and access the resulting liquidity provided by those earnings in U.S. dollars. We expect that this condition will continue for the foreseeable future. Additionally, government regulations affecting our ability to manage our Venezuelan subsidiary's capital structure, purchasing, product pricing, customer invoicing and collections, and labor relations; and the current political and economic situation within Venezuela have resulted in an acute degradation in the ability to make key operational decisions. This lack of exchangeability and degradation in our ability to control key operational decisions has resulted in a lack of control over our Venezuelan subsidiary for U.S. accounting purposes. Therefore, we concluded we no longer met the accounting criteria for consolidation and deconsolidated our Venezuelan subsidiary effective as of September 30, 2015 and began accounting for the investment in our Venezuelan subsidiary using the cost method of accounting. This change resulted in a one-time charge of $ 171 million , which includes $83 million of bolivar denominated cash and $40 million of intercompany receivables from our Venezuelan subsidiary. The factors that led to the deconsolidation of our Venezuelan subsidiary at the end of the third quarter of 2015 continued to exist through the end of 2016. Any dividends from our Venezuelan subsidiaries will be recorded as other income upon receipt of the cash in U.S. dollars. While we do not expect to enter into material transactions with our subsidiary in Venezuela that would result in the creation of additional intercompany receivable balances, if any such transactions were completed, we would evaluate collectability of the intercompany receivable balance at that time which could result in a charge negatively affecting our results of operations. Please see Note 1 to the accompanying unaudited Consolidated Financial Statements. Prior to the deconsolidation, our operations in Venezuela accounted for approximately 1% of consolidated total revenue for the nine months ended September 30, 2015 and for the twelve months ended December 31, 2014, and approximately 3% and 4% of consolidated operating income for the same periods, respectively.

Financial Condition—December 31, 2016

Cash flows provided by operating activities, investing activities and financing activities for the years ended December 31, 2016 and 2015 , respectively, are summarized as follows:

	Year Ended December 31,		
(dollars in millions)	**2016**	**2015**	**Change**
Net Cash Provided by Operating Activities	$ 2,343	$ 1,855	$ 488
Net Cash Used in Investing Activities	(1,319)	(1,344)	25
Net Cash Used in Financing Activities	(56)	(219)	163
Effect of Exchange Rates on Cash and Cash Equivalents	(3)	(18)	15
Net Change in Cash and Cash Equivalents	$ 965	$ 274	$ 691

Operating Activities

Cash provided by operating activities increased to $2.343 billion in 2016 compared to $1.855 billion in 2015 . The increase in cash provided by operating activities was primarily due to growth in earnings before income tax driven by continued optimization of Network Access Costs, and an increase in cash provided by working capital. Cash provided by operating activities is subject to variability period over period as a result of the timing of the collection of receivables and payments related to interest expense, accounts payable, bonuses and capital expenditures.

Investing Activities

Cash used in investing activities decreased to $1.319 billion in 2016 compared to $1.344 billion in 2015 , primarily as a result of an $83 million write-down in 2015 of our Venezuelan bolivar denominated cash balance, which was deconsolidated as of September 30, 2015. This decrease was partially offset by an increase in capital expenditures, which totaled $1.334 billion in 2016 and $1.229 billion in 2015 .

Financing Activities

Cash used in financing activities of $56 million in 2016 decreased compared to $219 million used in financing activities in 2015 . See Note 10 - Long-Term Debt in the notes to the Consolidated Financial Statements for more details regarding our debt transactions during 2016 and 2015 .

Effect of Exchange Rates on Cash and Cash Equivalents

The effect of exchange rates on cash and cash equivalents in 2016 and 2015 was a reduction in cash of $3 million and $18 million , respectively, and was primarily due to the fluctuations of the U.S. dollar against currencies in EMEA and Latin America, including Venezuela prior to its deconsolidation.

Liquidity and Capital Resources

We had $1.819 billion of cash and cash equivalents on hand at December 31, 2016 . We also had $38 million of current and non-current restricted cash and securities used to collateralize outstanding letters of credit and certain performance and operating obligations and other deposits at December 31, 2016 .

Free Cash Flow is defined by us as net cash provided by (used in) operating activities less capital expenditures as disclosed in the Consolidated Statements of Cash Flows. Management believes that Free Cash Flow is a relevant metric to provide to investors, as it is an indicator of our ability to generate cash to service our debt. Free Cash Flow excludes cash used for acquisitions, principal repayments and the impact of exchange rate changes on cash and cash equivalents balances.

There are material limitations to using Free Cash Flow to measure our performance as it excludes certain material items such as principal payments on and repurchases of long-term debt and cash used to fund acquisitions. Comparisons of our Free Cash Flow to that of some of our competitors may be of limited usefulness since we do not currently pay a significant amount of income taxes due to net operating losses, and therefore, generate higher cash flow than a comparable business that does pay income taxes. Additionally, this financial measure is subject to variability quarter over quarter as a result of the timing of payments related to interest expense, accounts receivable and accounts payable and capital expenditures. Free Cash Flow should not be used as a substitute for net change in cash and cash equivalents on the Consolidated Statements of Cash Flows.

The following information provides a reconciliation of Net Cash Provided by Operating Activities to Free Cash Flow as defined by us:

	Year Ended December 31,		
(dollars in millions)	**2016**	**2015**	**2014**
Net Cash Provided by Operating Activities	$ 2,343	$ 1,855	$ 1,161
Capital Expenditures	(1,334)	(1,229)	(910)
Free Cash Flow	$ 1,009	$ 626	$ 251

Free Cash Flow was $1.009 billion in 2016 compared to $626 million in 2015 , reflecting a $383 million improvement driven by $488 million of higher cash provided by operating activities offset by $105 million of higher spending on capital expenditures in 2016 . For the full year 2017 , we expect to generate Free Cash Flow of $1.10 to $1.16 billion excluding any CenturyLink merger related expenses.

Capital expenditures for 2017 are expected to be approximately 16% of revenue, consistent with 16% of revenue in 2016 as we invest in base capital expenditures (estimated capital required to keep the network operating efficiently and support new service development) with the remaining capital expenditures expected to be partly success-based, which is tied to a specific customer revenue opportunity, and partly project-based where capital is used to expand the network based on our expectation that the project will eventually lead to incremental revenue.

Net cash interest payments are expected to increase to approximately $520 million in 2017 from $508 million in 2016 based on forecasted interest rates on our variable rate debt outstanding as of December 31, 2016. As of December 31, 2016 , we had contractual debt obligations, including capital lease obligations, but excluding interest and discounts on debt issuance, of $7 million that mature in 2017 , $306 million in 2018 , and $822 million in 2019 .

We currently have the ability to repatriate cash and cash equivalents into the United States without paying or accruing U.S. taxes. We do not currently intend to repatriate to the United States any of our foreign cash and cash equivalents from operating entities outside of Latin America. We have no material restrictions on our ability to repatriate to the United States foreign cash and cash equivalents. We had approximately $49 million of non-U.S. denominated cash and cash equivalents at December 31, 2016.

We believe our current liquidity and anticipated future cash flows from operations will be sufficient to fund our business for at least the next twelve months.

We may need to refinance all or a portion of our indebtedness at or before maturity and cannot provide assurances that we will be able to refinance any such indebtedness on commercially reasonable terms or at all. In addition, we may elect to secure additional capital in the future, at acceptable terms, to improve our liquidity or fund acquisitions. In addition, in an effort to reduce future cash interest payments as well as future amounts due at maturity or to extend debt maturities, we may, from time to time, issue new debt, enter into debt for debt, debt for equity or cash transactions to purchase our outstanding debt securities in the open market or through privately negotiated transactions. In addition, we may consider other uses of capital or opportunities to return cash to stockholders. We will evaluate any such transactions in light of the existing market conditions and the possible dilutive effect to stockholders. The amounts involved in any such transaction, individually or in the aggregate, may be material.

In addition to raising capital through the debt and equity markets, we may sell or dispose of existing businesses, investments or other non-core assets.

Consolidation of the communications industry may continue. We will continue to evaluate consolidation opportunities and could make additional acquisitions in the future.

In pursuing any of these various actions, we would also need to address any restrictions contained in the CenturyLink Merger agreement or obtain a waiver of those restrictions.

Off-Balance Sheet Arrangements

We have not entered into off-balance sheet arrangements.

Contractual Obligations

The following table summarizes our contractual obligations and other commercial commitments at December 31, 2016 , as further described in the Notes to Consolidated Financial Statements.

Payments Due by Period

(dollars in millions)	Total	Less than 1 Year	2 - 3 Years	4 - 5 Years	After 5 Years
Contractual Obligations					
Long-Term Debt, including current portion	$ 11,009	$ 7	$ 1,128	$ 2,454	$ 7,420
Interest Obligations	2,990	523	1,013	796	658
Asset Retirement Obligations	89	13	10	3	63
Operating Leases	1,537	282	466	288	501
Right of Way Agreements	743	162	151	105	325
Purchase and Other Obligations	1,276	941	212	51	72
Other Commercial Commitments					
Letters of Credit	39	5	4	1	29

Our debt instruments contain certain covenants which, among other things, limit additional indebtedness, dividend payments, certain investments and transactions with affiliates. If we should fail to comply with these covenants, amounts due under the instruments may be accelerated at the debt holder's discretion after the declaration of an event of default. Our debt instruments do not have covenants that require us or our subsidiaries to maintain certain levels of financial performance or other financial measures such as total leverage or minimum revenue. These types of covenants are commonly referred to as "maintenance covenants."

Interest obligations assume interest rates on $4.9 billion of variable rate debt do not change from December 31, 2016 . In addition, interest is calculated based on debt outstanding as of December 31, 2016 .

Our asset retirement obligations consist of legal requirements to remove certain of our network infrastructure at the expiration of the underlying right-of-way ("ROW") term and restoration requirements for leased facilities. The initial and subsequent measurement of our asset retirement obligations require us to make estimates regarding the eventual costs and probability or likelihood that we will be required to remove certain of our network infrastructure and restore certain of our leased properties.

Certain right of way agreements include provisions for increases in payments in future periods based on the rate of inflation as measured by various price indexes. We have not included estimates for these increases in future periods in the amounts included above.

Certain non-cancelable right of way agreements provide for automatic renewal on a periodic basis. We include payments due during these automatic renewal periods given the significant cost to relocate our network and other facilities.

Certain other right of way agreements are currently cancelable or can be terminated under certain conditions by us. We include the payments under such cancelable right of way agreements in the table above for a period of 1 year from January 1, 2017 , if we do not consider it likely that we will cancel the right of way agreement within the next year.

Purchase and other obligations represent all our outstanding purchase order amounts as of December 31, 2016 ($616 million), contractual commitments with third parties to purchase network access services ($425 million) and fixed maintenance payments for portions of our network ($235 million).

The table above does not include other long-term liabilities, such as liabilities recorded for legal matters that are not contractual obligations by nature. We cannot determine with any degree of certainty the years in which these liabilities might ultimately be paid.

Due to uncertainty regarding the completion of tax audits and possible outcomes, the remaining estimate of the timing of payments related to uncertain tax positions and interest cannot be made. See Note 13 - Income Taxes and Note 15 - Commitments, Contingencies and Other Items in the notes to Consolidated Financial Statements for additional information regarding our uncertain tax positions.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We are subject to market risks arising from changes in interest rates. As of December 31, 2016 , Level 3 Financing had borrowed a total of approximately $4.9 billion primarily under term loans pursuant to a senior secured credit facility (excluding discounts) and Floating Rate Senior Notes due 2018 that bear interest at LIBOR rates plus an applicable margin. As the LIBOR rates fluctuate, so too will the interest expense on amounts borrowed under the debt instruments, unless LIBOR rates are below the minimum LIBOR rate for a particular Senior Secured Term Loan. The weighted average interest rate on these variable rate instruments at December 31, 2016 , was approximately 3.8% .

At December 31, 2016, the senior secured credit facility's variable interest rate is based on a fixed rate of 3.0% plus LIBOR, with a fixed minimum LIBOR rate of 1.0% for both the $815 million Tranche B-III 2019 and the $1.796 billion Tranche B 2020 Term Loans and the interest rate is based on a fixed rate of 2.75% plus LIBOR, with a minimum fixed LIBOR of 0.75% for the $2 billion Tranche B-II 2022 Term Loan. The effective market LIBOR rate for the senior secured credit facility was approximately 0.68% for the Tranche B-II 2022 Term Loan, and 0.85% for the Tranche B-III 2019 Term Loan and the Tranche B 2020 Term Loan at December 31, 2016 , respectively, which were below the fixed minimum rate. Declines in LIBOR below the fixed minimum rate or increases up to the fixed minimum rate do not affect our annual interest expense. A hypothetical increase in LIBOR by 1% point would increase our annual interest expense on all of our variable rate instruments by approximately $44 million as of December 31, 2016 .

At December 31, 2016 , we had $6.1 billion (excluding discounts) of fixed rate debt bearing a weighted average interest rate of 5.5% . A decline in interest rates in the future will not generally benefit us with respect to the fixed rate debt due to the terms and conditions of the indentures relating to that debt that would require us to repurchase the debt at specified premiums if redeemed early. Indicated changes in interest rates are based on hypothetical movements and are not necessarily indicative of the actual results that may occur.

Foreign Currency Exchange Rate Risk

We conduct a portion of our business in currencies other than the U.S. dollar, the currency in which our Consolidated Financial Statements are reported. Accordingly, our operating results could be adversely affected by foreign currency exchange rate volatility relative to the U.S. dollar. Our European subsidiaries and certain Latin American subsidiaries use the local currency as their functional currency, as the majority of their revenue and purchases are transacted in their local currencies. Certain Latin American countries previously designated as highly inflationary economies use the U.S. dollar as their functional currency. Although we continue to evaluate strategies to mitigate risks related to the effect of fluctuations in currency exchange rates, we will likely recognize gains or losses from international transactions. Changes in foreign currency rates could adversely affect our operating results.

Please see Venezuela Effects in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Form 10-K.

Future earnings and losses will be affected by actual fluctuations in interest rates and foreign currency rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial statements and supplementary financial information for Level 3 Communications, Inc. and Subsidiaries begin on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

The Company's Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of the Company's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as of December 31, 2016 . Based upon such review, the Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures are effective and are designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in reports it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during the fourth quarter of 2016 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, management assessed the effectiveness of internal controls over financial reporting as of December 31, 2016 based on the guidelines established in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on the Company's assessment, management has concluded that our internal control over financial reporting was effective as of December 31, 2016 .

Our independent registered public accounting firm, KPMG LLP, has issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2016 . That report appears on page F-3.

ITEM 9B. OTHER INFORMATION

None.

Part III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10 is incorporated by reference to our definitive proxy statement for the 2017 Annual Meeting of Stockholders to be filed with the SEC.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 is incorporated by reference to our definitive proxy statement for the 2017 Annual Meeting of Stockholders to be filed with the SEC.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information called for by Item 201(d) of Regulation S-K regarding our compensation plans (including individual compensation arrangements) under which our equity securities are authorized for issuance is contained in Item 5, "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Repurchases of Equity Securities" above. The other information required by this Item 12 is incorporated by reference to our definitive proxy statement for the 2017 Annual Meeting of Stockholders to be filed with the SEC.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item 13 is incorporated by reference to our definitive proxy statement for the 2017 Annual Meeting of Stockholders to be filed with the SEC.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item 14 is incorporated by reference to our definitive proxy statement for the 2017 Annual Meeting of Stockholders to be filed with the SEC.

Part IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a)	Financial statements and financial statement schedules required to be filed for the registrant under Items 8 or 15 are set forth following the index page at page F-l. Exhibits filed as a part of this report are listed below. Exhibits incorporated by reference are indicated in parentheses.
2.1	Agreement and Plan of Merger, dated as of October 31, 2016, by and among Level 3 Communications, Inc., CenturyLink, Inc., Wildcat Merger Sub 1 LLC and WWG Merger Sub LLC. (incorporated by reference to Exhibit 2.1 to the Registrant’s Current Report on Form 8-K dated November 3, 2016).
3.1	Restated Certificate of Incorporation of Level 3 Communications, Inc. (incorporated by reference to Exhibit 3(i) to the Registrant's Current Report on Form 8-K dated May 23, 2008).

3.2.1	Certificate of Amendment of Restated Certificate of Incorporation of Level 3 Communications, Inc. (incorporated by reference to Exhibit 3.2 of Level 3 Communications, Inc.'s Registration Statement on Form S-3 (SEC File No. 333-160493) filed with the Securities and Exchange Commission on July 9, 2009).
3.2.2	Certificate of Amendment of Restated Certificate of Incorporation of Level 3 Communications, Inc. (incorporated by reference to Exhibit 3.2 of Level 3 Financing, Inc.'s, Level 3 Communications, Inc.'s and Level 3 Communications, LLC's Registration Statement on Form S-4 (SEC File No. 333-167110) filed on May 26, 2010).
3.2.3	Certificate of Amendment to the Restated Certificate of Incorporation of Level 3 Communications, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K dated October 6, 2011).
3.2.4	Certificate of Amendment of the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1.2 to the Form 8-A filed on October 19, 2011).
3.2.5	Certificate of Amendment of Restated Certificate of Incorporation of Level 3 Communications, Inc. (incorporated by reference to Exhibit 3.1.1 to the Registrant's Quarterly Report on Form 10-Q for the three months ended June 30, 2012).
3.2.6	Certificate of Amendment of Restated Certificate of Incorporation of Level 3 Communications, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K dated November 5, 2014).
3.2.7	Certificate of Amendment of Restated Certificate of Incorporation of Level 3 Communications, Inc., dated as of May 20, 2016 (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q for the three months ended June 30, 2016).
3.3	Conformed copy of the Restated Certificate of Incorporation of Level 3 Communications, Inc., as amended through May 20, 2016 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K dated May 20, 2016).
3.4	Amended and Restated By-Laws of Level 3 Communications, Inc., effective as of February 24, 2016 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K dated March 1, 2016).
4.1.1	Rights Agreement, dated as of April 10, 2011, by and between Level 3 Communications, Inc. and Wells Fargo Bank, N.A., as rights agent (incorporated by reference to Exhibit 4.1 to the Registrant's Form 8-A dated April 11, 2011).
4.1.2	Amendment to the Rights Agreement, dated as of March 15, 2012, by and between Level 3 Communications, Inc. and Wells Fargo Bank, N.A., as rights agent (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K dated March 13, 2012).
4.1.3	Amendment No. 2 to the Rights Agreement, dated as of July 21, 2014, by and between Level 3 Communications, Inc. and Wells Fargo Bank, N.A., as rights agent (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated July 22, 2014).
4.1.4	Amendment No. 3 to the Rights Agreement, dated as of October 31, 2016, by and between Level 3 Communications, Inc. and Wells Fargo Bank, N.A. as rights agent (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated November 3, 2016).
4.2.1	Indenture, dated as of November 26, 2013, among Level 3 Communications, Inc., as Guarantor, Level 3 Financing, Inc., as Issuer, and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the Floating Rate Senior Notes due 2018 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated November 26, 2013).

4.2.2	Supplemental Indenture, dated as of March 14, 2014, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to Level 3 Communications, LLC's unconditioned, unsecured guarantee of the Floating Rate Senior Notes due 2018 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated March 14, 2014).
4.2.3	Supplemental Indenture, dated as of March 14, 2014, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the subordination in any bankruptcy, liquidation or winding up proceeding of the guarantee by Level 3 Communications, LLC of the Floating Rate Senior Notes due 2018 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.4 to the Registrant's Current Report on Form 8-K dated March 14, 2014).
4.3.1	Indenture, dated as of August 12, 2014, between Level 3 Escrow II, Inc., as Issuer, and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the 5.375% Senior Notes due 2022 of Level 3 Escrow II, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated August 12, 2014).
4.3.2	Securities Assumption Supplemental Indenture, dated as of October 31, 2014, by and among Level 3 Escrow II, Inc., Level 3 Financing, Inc., Level 3 Communications, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated October 30, 2014).
4.3.3	Supplemental Indenture, dated as of October 31, 2014, by and among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the subordination in any bankruptcy, liquidation or winding up proceeding of the guarantee by Level 3 Communications, LLC of the 5.375% Senior Notes due 2022 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated October 30, 2014).
4.4	Indenture, dated as of December 1, 2014, between Level 3 Communications, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the 5.75% Senior Notes due 2022 of Level 3 Communications, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated December 1, 2014).
4.5.1	Indenture, dated as of January 29, 2015, among Level 3 Communications, Inc., as Guarantor, Level 3 Financing, Inc., as Issuer, and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the 5.625% Senior Notes due 2023 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated January 30, 2015).
4.5.2	Supplemental Indenture, dated as of June 3, 2015, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to Level 3 Communications, LLC's unconditioned, unsecured guarantee of the 5.625% Senior Notes due 2023 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated June 4, 2015).
4.5.3	Supplemental Indenture, dated as of June 3, 2015, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the subordination in any bankruptcy, liquidation or winding up proceeding of the guarantee by Level 3 Communications, LLC of the 5.625% Senior Notes due 2023 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated June 4, 2015).

4.6.1	Indenture, dated as of April 28, 2015, among Level 3 Communications, Inc., as Guarantor, Level 3 Financing, Inc., as Issuer, and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the 5.375% Senior Notes due 2025 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated April 30, 2015).
4.6.2	Supplemental Indenture, dated as of September 1, 2015, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to Level 3 Communications, LLC's unconditioned, unsecured guarantee of the 5.375% Senior Notes due 2025 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated September 2, 2015).
4.6.3	Supplemental Indenture, dated as of September 1, 2015, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the subordination in any bankruptcy, liquidation or winding up proceeding of the guarantee by Level 3 Communications, LLC of the 5.375% Senior Notes due 2025 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.4 to the Registrant's Current Report on Form 8-K dated September 2, 2015).
4.7.1	Indenture, dated as of April 28, 2015, among Level 3 Communications, Inc., as Guarantor, Level 3 Financing, Inc., as Issuer, and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the 5.125% Senior Notes due 2023 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated April 30, 2015).
4.7.2	Supplemental Indenture, dated as of September 1, 2015, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to Level 3 Communications, LLC's unconditioned, unsecured guarantee of the 5.125% Senior Notes due 2023 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated September 2, 2015).
4.7.3	Supplemental Indenture, dated as of September 1, 2015, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the subordination in any bankruptcy, liquidation or winding up proceeding of the guarantee by Level 3 Communications, LLC of the 5.125% Senior Notes due 2023 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated September 2, 2015).
4.8.1	Indenture, dated as of November 13, 2015, among Level 3 Communications, Inc., as Guarantor, Level 3 Financing, Inc., as Issuer, and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the 5.375% Senior Notes due 2024 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated November 13, 2015).
4.8.2	Supplemental Indenture, dated as of February 8, 2016, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to Level 3 Communications, LLC's unconditioned, unsecured guarantee of the 5.375% Senior Notes due 2024 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated February 8, 2016).

4.8.3	Supplemental Indenture, dated as of February 8, 2016, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the subordination in any bankruptcy, liquidation or winding up proceeding of the guarantee by Level 3 Communications, LLC of the 5.375% Senior Notes due 2024 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated February 8, 2016).
4.9.1	Indenture, dated as of March 22, 2016, among Level 3 Communications, Inc., as Guarantor, Level 3 Financing, Inc., as Issuer, and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the 5.25% Senior Notes due 2026 of Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated March 22, 2016).
4.9.2	Supplemental Indenture, dated as of September 16, 2016, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to Level 3 Communications, LLC's unconditioned, unsecured guarantee of the 5.25% Senior Notes due 2026 of Level 3 Financing, Inc. (incorporated by reference to exhibit 4.1 to the Registrant's Current Report on Form 8-K dated September 16, 2016).
4.9.3	Supplemental Indenture, dated as of September 16, 2016, among Level 3 Communications, LLC, as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to the subordination in any bankruptcy, liquidation or winding up proceeding of the guarantee by Level 3 Communications, LLC of the 5.25% Senior Notes due 2026 of Level 3 Financing, Inc. (incorporated by reference to exhibit 4.2 to the Registrant's Current Report on Form 8-K dated September 16, 2016).
4.10	Registration Agreement, dated as of March 22, 2016, among Level 3 Communications, Inc., Level 3 Financing, Inc. and Citigroup Global Markets Inc., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Morgan Stanley & Co. LLC, Barclays Capital Inc., Credit Suisse Securities (USA) LLC, Goldman, Sachs & Co. and J. P. Morgan Securities LLC, relating to Level 3 Financing, Inc.'s 5.25% Senior Notes due 2026. (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated March 22, 2016).
4.11	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, LLC as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, amending the Indenture dated as of March 22, 2016 governing the 5.25% Senior Notes due 2026 (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated November 28, 2016).
4.12	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, LLC as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, amending the Indenture dated as of November 13, 2015, governing the 5.375% Senior Notes due 2024 (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated November 28, 2016).
4.13	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, LLC as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, amending the Indenture dated as of April 28, 2015, governing the 5.125% Senior Notes due 2023 (incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated November 28, 2016).

4.14	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, LLC as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, amending the Indenture dated as of April 28, 2015, governing the 5.375% Senior Notes due 2025 (incorporated by reference to Exhibit 4.4 to the Registrant’s Current Report on Form 8-K dated November 28, 2016).
4.15	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, LLC as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, amending the Indenture dated as of January 29, 2015, governing the 5.625% Senior Notes due 2023 (incorporated by reference to Exhibit 4.5 to the Registrant’s Current Report on Form 8-K dated November 28, 2016).
4.16	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, LLC as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, amending the Indenture dated as of August 12, 2014, governing the 5.375% Senior Notes due 2022 (incorporated by reference to Exhibit 4.6 to the Registrant’s Current Report on Form 8-K dated November 28, 2016).
4.17	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, LLC as guarantor, Level 3 Communications, Inc., as guarantor, Level 3 Financing, Inc., as issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee, amending the Indenture dated as of November 14, 2013, governing the 6.125% Senior Notes due 2021 (incorporated by reference to Exhibit 4.7 to the Registrant’s Current Report on Form 8-K dated November 28, 2016).
4.18	Supplemental Indenture, dated as of November 22, 2016, among Level 3 Communications, Inc., and The Bank of New York Mellon Trust Company, N.A, amending the Indenture, dated as of December 1, 2014 governing the 5.750% Senior Notes due 2022 (incorporated by reference to Exhibit 4.8 to the Registrant’s Current Report on Form 8-K dated November 28, 2016).
10.1	Amendment No. 1 to Separation Agreement, dated March 18, 1997, by and among Peter Kiewit Sons', Inc., Kiewit Diversified Group Inc., PKS Holdings, Inc. and Kiewit Construction Group Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1997).
10.2	Form of Aircraft Time-Share Agreement (incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001).
10.3	Stockholder Rights Agreement, dated as of April 10, 2011, by and between Level 3 Communications, Inc. and STT Crossing Ltd. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated April 14, 2011).
10.4	Level 3 Communications, Inc. Stock Incentive Plan, effective May 21, 2015, as amended (incorporated by reference to Exhibit 10.1 to the Registrant’s Quarterly Report on Form 10-Q for the three months ended September 30, 2016).
10.5	Form of OSO Master Award Agreement of Level 3 Communications, Inc. (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K dated May 25, 2010).
10.6	Form of Amended Master Deferred Issuance Stock Agreement of Level 3 Communications, Inc. (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K dated May 25, 2010).
10.7.1	Form of Level 3 Communications, Inc. Restricted Stock Unit and Performance Restricted Stock Unit Master Award Agreement (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated April 1, 2014).

10.7.2	Form of Level 3 Communications, Inc. Restricted Stock Unit and Performance Unit Master Award Agreement (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q dated August 6, 2015).
10.7.3	Form of Level 3 Communications, Inc. Amended and Restated Restricted Stock Unit and Performance Unit Master Award Agreement, dated as of December 31, 2015 (incorporated by reference to Exhibit 10.7.3 to the Registrant's Form 10-K for the year ended December 31, 2015).
10.8.1	Level 3 Communications, Inc. Key Executive Severance Plan (as approved by the Board on April 1, 2014) (to be effective as of April 1, 2015) (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K dated April 1, 2014).
10.8.2	Restrictive Covenant Agreement, dated as of March 13, 2013 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated March 13, 2013).
10.8.3	Form of Key Executive Severance Plan Amendment Notice Letter Dated October 9, 2014 (incorporated by reference to Exhibit 10.8.3 to the Registrant's Annual Report on Form 10-K dated February 27, 2015).
10.9	Form of Master Deferred Issuance Stock Agreement for consultants (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K dated February 23, 2011).
10.10	2012 Management Incentive and Retention Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K dated March 23, 2012).
10.11	Credit Agreement, dated as of March 13, 2007, among Level 3 Communications, Inc., Level 3 Financing, Inc. and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated March 16, 2007).
10.12	Guarantee Agreement, dated as of March 13, 2007, among Level 3 Communications, Inc., the Subsidiaries of Level 3 Communications, Inc. and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K dated March 16, 2007).
10.13	Collateral Agreement, dated as of March 13, 2007, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Subsidiaries of Level 3 Communications, Inc. and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K dated March 16, 2007).
10.14	Indemnity, Subrogation and Contribution Agreement, dated as of March 13, 2007, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Subsidiaries of Level 3 Communications, Inc. and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K dated March 16, 2007).
10.15	Omnibus Offering Proceeds Note Subordination Agreement, dated as of March 13, 2007, among Level 3 Communications, Inc., Level 3 Financing, Inc., Level 3 Communications, LLC and the Subsidiaries party thereto (incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K dated March 16, 2007).
10.16	Supplement No. 1 to Omnibus Offering Proceeds Note Subordination Agreement, dated as of March 13, 2007, among Level 3 Communications, Inc., Level 3 Communications, LLC, Level 3 Financing, Inc. and the Subsidiaries party thereto (incorporated by reference to Exhibit 10.6 to the Registrant's Current Report on Form 8-K dated March 16, 2007).
10.17	Amendment Agreement to the March 13, 2007 Credit Agreement, dated April 16, 2009, among Level 3 Communications, Inc., Level 3 Financing, Inc. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, Morgan Stanley & Co. Incorporated, Citigroup Global Markets, Inc., Credit Suisse Securities (USA) LLC, Wachovia Bank, N.A., and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated April 17, 2009).

10.18	Amended and Restated Loan Proceeds Note Collateral Agreement, dated as of March 13, 2007, as amended and restated as of April 16, 2009, among Level 3 Financing, Inc., Level 3 Communications, LLC and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K dated April 17, 2009).
10.19	First Amendment, dated as of May 15, 2009, to the Amended and Restated Credit Agreement dated as of April 16, 2009, among Level 3 Communications, Inc., Level 3 Financing, Inc. and Merrill Lynch Pierce, Fenner & Smith Incorporated, Morgan Stanley & Co. Incorporated, Banc of America Securities LLC, Citigroup Global Markets, Inc., Credit Suisse Securities (USA) LLC, Wachovia Bank, N.A., and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated May 15, 2009).
10.20	Second Amendment Agreement to the Amended and Restated Credit Agreement, dated as of October 4, 2011, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated October 6, 2011).
10.21	Third Amendment Agreement to the Amended and Restated Credit Agreement, dated as of November 10, 2011, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated November 17, 2011).
10.22	Fourth Amendment Agreement to Amended and Restated Credit Agreement, dated as of August 6, 2012, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated August 9, 2012).
10.23	Fifth Amendment Agreement to Amended and Restated Credit Agreement dated October 4, 2012 among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated October 5, 2012).
10.24	Sixth Amendment Agreement to Amended and Restated Credit Agreement, dated as of August 12, 2013, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated August 12, 2013).
10.25	Seventh Amendment Agreement to Amended and Restated Credit Agreement, dated as of August 16, 2013, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated August 16, 2013).
10.26	Eighth Amendment Agreement to Amended and Restated Credit Agreement, dated as of October 4, 2013, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated October 4, 2013).
10.27	Ninth Amendment Agreement to Amended and Restated Credit Agreement, dated as of October 31, 2014, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated October 30, 2014).
10.28	Tenth Amendment Agreement to the Amended and Restated Credit Agreement, dated as of May 8, 2015, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated May 15, 2015).
10.29	Eleventh Amendment Agreement to the Amended and Restated Credit Agreement, dated as of November 22, 2016, among Level 3 Communications, Inc., Level 3 Financing, Inc., the Lenders party thereto and Merrill Lynch Capital Corporation (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated November 22, 2016).

10.30	Amended and Restated Loan Proceeds Note, dated as of May 8, 2015, issued by Level 3 Communications, LLC to Level 3 Financing, Inc. (incorporated by reference to Exhibit 10.2 to the Registrant’s Current Report on Form 8-K dated May 15, 2015).
10.31	Amended and Restated Loan Proceeds Note, dated as of May 8, 2015, issued by Level 3 Communications, LLC to Level 3 Financing, Inc. (incorporated by reference to Exhibit 10.3 to the Registrant’s Current Report on Form 8-K dated May 15, 2015).
10.32	Standstill Agreement, dated as of May 20, 2011, between Level 3 Communications, Inc. and Southeastern Asset Management, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated May 23, 2011).
10.33	Amendment to the Standstill Agreement, dated as of March 15, 2012, by and between Level 3 Communications, Inc. and Southeastern Asset Management Inc. (incorporated by reference to Exhibit 10.2 to the Registrant’s Current Report on Form 8-K dated March 13, 2012).
10.34	Amendment No. 2 to the Standstill Agreement, dated as of July 21, 2014, by and between Level 3 Communications, Inc. and Southeastern Asset Management Inc. (incorporated by reference to Exhibit 10.2 to the Registrant’s Current Report on Form 8-K dated July 21, 2014).
10.35	Exchange Agreement, dated as of March 13, 2012, by and among Level 3 Communications, Inc., Longleaf Partners Fund, a series of the Longleaf Partners Fund Trust, and solely with respect to Sections 3, 5.3 and 5.4 therein, Southeastern Asset Management Inc. (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated March 13, 2012).
10.36	Voting Agreement, dated as of October 31, 2016, by and between STT Crossing Ltd, CenturyLink, Inc. and, for the limited purposes set forth therein, Level 3 Communications, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K dated November 3, 2016).
12	Statements re computation of ratios.
21	List of subsidiaries of the Registrant.
23	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
31.1	Rule 13a-14(a)/15d-14(a) Certification of the Chief Executive Officer.
31.2	Rule 13a-14(a)/15d-14(a) Certification of the Chief Financial Officer.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following materials from the Annual Report on Form 10-K of Level 3 Communications, Inc. for the year ended December 31, 2016, formatted in XBRL (eXtensible Business Reporting Language); (i) Consolidated Statements of Income, (ii) Consolidated Statements of Comprehensive Income, (iii) Consolidated Balance Sheets, (iv) Consolidated Statements of Cash Flows, (v) Consolidated Statements of Changes in Stockholders' Equity and (vi) Notes to Consolidated Financial Statements.

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Schedules not indicated above have been omitted because of the absence of the condition under which they are required or because the information called for is shown in the Consolidated Financial Statements or in the notes hereto.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Level 3 Communications, Inc.:

We have audited the accompanying consolidated balance sheets of Level 3 Communications, Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of income, comprehensive income, cash flows and changes in stockholders' equity for each of the years in the three-year period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Level 3 Communications, Inc. and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Level 3 Communications, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 24, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

Denver, Colorado
February 24, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Level 3 Communications, Inc.:

We have audited Level 3 Communications, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Level 3 Communications, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Annual Report on Internal Control Over Financial Reporting* . Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Level 3 Communications, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Level 3 Communications, Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of income, comprehensive income, cash flows and changes in stockholders' equity, for each of the years in the three-year period ended December 31, 2016, and our report dated February 24, 2017, expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Denver, Colorado
February 24, 2017

Table of Contents

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Statements of Income
For each of the three years ended December 31,

(dollars in millions, except per share data)	2016	2015	2014
Revenue	$ 8,172	$ 8,229	$ 6,777
Costs and Expenses:			
Network access costs	2,725	2,833	2,529
Network related expenses	1,346	1,432	1,246
Depreciation and amortization	1,250	1,166	808
Selling, general and administrative expenses	1,407	1,467	1,181
Total Costs and Expenses	6,728	6,898	5,764
Operating Income	1,444	1,331	1,013
Other Income (Expense):			
Interest income	4	1	1
Interest expense	(546)	(642)	(654)
Loss on modification and extinguishment of debt	(40)	(218)	(53)
Venezuela deconsolidation charge	—	(171)	—
Other, net	(20)	(18)	(69)
Total Other Expense	(602)	(1,048)	(775)
Income Before Income Taxes	842	283	238
Income Tax (Expense) Benefit	(165)	3,150	76
Net Income	$ 677	$ 3,433	$ 314
Basic Earnings per Common Share			
Net Income Per Share	$ 1.89	$ 9.71	$ 1.23
Weighted-Average Shares Outstanding (in thousands)	358,559	353,385	254,428
Diluted Earnings per Common Share			
Net Income Per Share	$ 1.87	$ 9.58	$ 1.21
Weighted-Average Shares Outstanding (in thousands)	361,472	358,593	258,483

See accompanying notes to Consolidated Financial Statements.

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income
For each of the three years ended December 31,

(dollars in millions)	2016	2015	2014
Net Income	$ 677	$ 3,433	$ 314
Other Comprehensive Loss net of Tax:			
Foreign currency translation adjustments, net of tax effect of $39, $13, and $0	(80)	(162)	(178)
Defined benefit pension plan adjustments, net of tax effect of $4, ($2), and $0	(6)	8	(5)
Other Comprehensive Loss, net of Tax	(86)	(154)	(183)
Comprehensive Income	$ 591	$ 3,279	$ 131

See accompanying notes to Consolidated Financial Statements.

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
As of December 31,

(dollars in millions, except share data)	2016	2015
Assets:		
Current Assets:		
Cash and cash equivalents	$ 1,819	$ 854
Restricted cash and securities	7	8
Receivables, less allowances for doubtful accounts of $29 and $32, respectively	712	757
Other	115	111
Total Current Assets	2,653	1,730
Property, Plant and Equipment, net of accumulated depreciation of $11,249 and $10,365, respectively	10,139	9,878
Restricted Cash and Securities	31	42
Goodwill	7,729	7,749
Other Intangibles, net	915	1,127
Deferred Tax Assets	3,370	3,441
Other Assets, net	51	50
Total Assets	$ 24,888	$ 24,017
Liabilities and Stockholders' Equity:		
Current Liabilities:		
Accounts payable	$ 706	$ 629
Current portion of long-term debt	7	15
Accrued payroll and employee benefits	195	218
Accrued interest	129	108
Current portion of deferred revenue	266	267
Other	168	179
Total Current Liabilities	1,471	1,416
Long-Term Debt, less current portion	10,877	10,866
Deferred Revenue, less current portion	1,001	977
Other Liabilities	622	632
Total Liabilities	13,971	13,891
Commitments and Contingencies	—	—
Stockholders' Equity:		
Preferred stock, $.01 par value, authorized 10,000,000 shares: no shares issued or outstanding	—	—
Common stock, $.01 par value, authorized 433,333,333 shares in both periods; 360,021,098 shares issued and outstanding at December 31, 2016 and 356,374,473 shares issued and outstanding at December 31, 2015	4	4
Additional paid-in capital	19,800	19,642
Accumulated other comprehensive loss	(387)	(301)
Accumulated deficit	(8,500)	(9,219)
Total Stockholders' Equity	10,917	10,126
Total Liabilities and Stockholders' Equity	$ 24,888	$ 24,017

See accompanying notes to Consolidated Financial Statements.

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
For each of the three years ended December 31,

(dollars in millions)	2016	2015	2014
Cash Flows from Operating Activities:			
Net income	$ 677	$ 3,433	$ 314
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,250	1,166	808
Loss on impairment	—	—	18
Non-cash compensation expense attributable to stock awards	156	141	73
Loss on modification and extinguishment of debt	40	218	53
Venezuela deconsolidation charge	—	171	—
Accretion of debt discount and amortization of debt issuance costs	21	24	36
Accrued interest on long-term debt, net	21	(57)	12
Non-cash tax adjustments	—	—	(7)
Deferred income taxes	123	(3,202)	(116)
(Gain) loss on sale of property, plant, and equipment and other assets	(2)	1	(3)
Other, net	(10)	35	(8)
Changes in working capital items:			
Receivables	31	(87)	9
Other current assets	(36)	(11)	2
Accounts payables	83	4	(77)
Deferred revenue	18	88	6
Other current liabilities	(29)	(69)	41
Net Cash Provided by Operating Activities	2,343	1,855	1,161
Cash Flows from Investing Activities:			
Capital expenditures	(1,334)	(1,229)	(910)
Cash related to deconsolidated Venezuela operations	—	(83)	—
Change in restricted cash and securities, net	12	(22)	(10)
Proceeds from sale of property, plant and equipment and other assets	3	4	3
Investment in tw telecom, net of cash acquired	—	—	(167)
Other	—	(14)	(2)
Net Cash Used in Investing Activities	(1,319)	(1,344)	(1,086)
Cash Flows from Financing Activities:			
Long-term debt borrowings, net of issuance costs	764	4,832	589
Payments on and repurchases of long-term debt and capital leases	(820)	(5,051)	(671)
Net Cash Used in Financing Activities	(56)	(219)	(82)
Effect of Exchange Rates on Cash and Cash Equivalents	(3)	(18)	(44)
Net Change in Cash and Cash Equivalents	965	274	(51)
Cash and Cash Equivalents at Beginning of Year	854	580	631
Cash and Cash Equivalents at End of Year	$ 1,819	$ 854	$ 580

Supplemental Disclosure of Cash Flow Information:			
Cash interest paid	$ 508	$ 668	$ 598
Income taxes paid, net of refunds	$ 35	$ 50	$ 44
Non-cash Investing and Financing Activities:			
Capital lease obligations incurred	$ 1	$ 6	$ 2
Long-term debt conversion into equity	$ —	$ 333	$ 142
Accrued interest conversion into equity	$ —	$ 10	$ 2
Long-term debt issued and proceeds placed in escrow	$ —	$ —	$ 3,000
Escrowed securities used in the acquisition of tw telecom	$ —	$ —	$ 3,014

See accompanying notes to Consolidated Financial Statements.

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Statements of Changes in Stockholders' Equity
For each of the three years ended December 31,

(dollars in millions, except share data)	Common Stock Shares	Common Stock $	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
Balance at January 1, 2014	234,688,063	$ 2	$ 14,339	$ 36	$ (12,966)	$ 1,411
Common stock:						
Common stock issued under employee stock benefit plans and other	4,528,559	—	78	—	—	78
Stock-based compensation	—	—	55	—	—	55
tw telecom acquisition equity consideration	96,868,883	1	4,543	—	—	4,544
Conversion of debt to equity	5,275,915	—	144	—	—	144
Net Income	—	—	—	—	314	314
Other Comprehensive Loss	—	—	—	(183)	—	(183)
Balance at December 31, 2014	341,361,420	$ 3	$ 19,159	$ (147)	$ (12,652)	$ 6,363
Common stock:						
Common stock issued under employee stock benefit plans and other	2,696,470	—	35	—	—	35
Stock-based compensation	—	—	106	—	—	106
Conversion of debt to equity	12,316,583	1	342	—	—	343
Net Income	—	—	—	—	3,433	3,433
Other Comprehensive Loss	—	—	—	(154)	—	(154)
Balance at December 31, 2015	356,374,473	$ 4	$ 19,642	$ (301)	$ (9,219)	$ 10,126
Common stock:						
Common stock issued under employee stock benefit plans and other	3,646,625	—	37	—	—	37
Stock-based compensation	—	—	121	—	—	121
Net Income	—	—	—	—	677	677
Adoption of ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting*	—	—	—	—	42	42
Other Comprehensive Loss	—	—	—	(86)	—	(86)
Balance at December 31, 2016	360,021,098	$ 4	$ 19,800	$ (387)	$ (8,500)	$ 10,917

See accompanying notes to Consolidated Financial Statements.

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements

(1) Organization and Summary of Significant Accounting Policies

Description of Business

Level 3 Communications, Inc. and subsidiaries is a facilities-based provider (that is, a provider that owns or leases a substantial portion of the plant, property and equipment necessary to provide our services) of a broad range of integrated communications services. We created our communications network by constructing our own assets and through a combination of purchasing other companies and purchasing or leasing facilities from others. Our network is an international, facilities-based communications network. We designed our network to provide communications services that employ and take advantage of rapidly improving underlying optical, Internet Protocol, computing and storage technologies.

On October 31, 2014 , we completed the acquisition of tw telecom inc. (“tw telecom”) and tw telecom became our indirect, wholly owned subsidiary through a tax-free, stock and cash reorganization. See Note 3 - Events Associated with the Acquisition of tw telecom inc.

On October 31, 2016, we entered into an agreement and plan of merger (the "Merger Agreement") with CenturyLink, Inc., a Louisiana corporation ("CenturyLink"), Wildcat Merger Sub 1 LLC, a Delaware limited liability company and an indirect wholly owned subsidiary of CenturyLink ("Merger Sub 1"), and WWG Merger Sub LLC, a Delaware limited liability company and an indirect wholly owned subsidiary of CenturyLink ("Merger Sub 2"), pursuant to which, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, we will be acquired by CenturyLink in a cash and stock transaction, including the assumption of our debt (the "CenturyLink Merger"). See Note 2 - CenturyLink Merger .

Principles of Consolidation and Basis of Presentation

The consolidated financial statements include our and our subsidiaries' accounts in which we have a controlling interest. All significant intercompany accounts and transactions have been eliminated. The accompanying Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP").

As part of our consolidation policy, we consider our controlled subsidiaries, investments in businesses in which we are not the primary beneficiary or do not have effective control but have the ability to significantly influence operating and financial policies, and variable interests resulting from economic arrangements that give us rights to economic risks or rewards of a legal entity. We do not have variable interests in a variable interest entity where we are required to consolidate the entity as the primary beneficiary.

Prior to October 1, 2015, we included the results of our wholly owned Venezuelan subsidiary in our Consolidated Financial Statements using the consolidation method of accounting. Our Venezuelan subsidiary was in the Latin America segment and had total revenue of $ 72 million for the nine months ended September 30, 2015. For more information on our segments and non-GAAP measures see Note 16 - Segment Information.

Venezuelan exchange control regulations have resulted in an other-than-temporary lack of exchangeability between the Venezuelan bolivar and U.S. dollar, and have restricted our Venezuelan operations’ ability to pay dividends and settle intercompany obligations in U.S. dollars. The severe currency controls imposed by the Venezuelan government have significantly limited the ability to realize the benefits from earnings of our Venezuelan operations and access the resulting liquidity provided by those earnings in U.S. dollars. We expect that this condition will continue for the foreseeable future.

Additionally, government regulations affecting our ability to manage our Venezuelan subsidiary’s capital structure, purchasing, product pricing, customer invoicing and collections, and labor relations; and the current political and economic situation within Venezuela have resulted in an acute degradation in our ability to make key operational decisions for our Venezuelan operations. The lack of exchangeability between the Venezuelan bolivar and the U.S. dollar and the degradation in our ability to control key operational decisions resulting in a lack of control over our Venezuelan subsidiary for U.S. accounting purposes, we concluded it no longer met the accounting criteria for consolidation and deconsolidated our Venezuelan subsidiary on September 30, 2015, and began accounting for our variable interest investment in our Venezuelan operations using the cost method of accounting. As a result of deconsolidating our Venezuelan subsidiary, we recorded a one-time charge of $171 million in the third quarter of 2015, which had no accompanying tax benefit. Our financial results no longer include the operating results of our Venezuelan operations. The factors that led to the deconsolidation of our Venezuelan subsidiary at the end of the third quarter of 2015 continued to exist through the end of 2016. Any dividends from our Venezuelan subsidiary are recorded as other income upon receipt of the cash in U.S. dollars. Prior period results have not been adjusted to reflect the deconsolidation of our Venezuelan subsidiary.

Foreign Currency Translation

Local currencies of foreign subsidiaries are the functional currencies for financial reporting purposes except for certain foreign subsidiaries in Latin America. For operations outside the United States that have functional currencies other than the U.S. dollar, assets and liabilities are translated to U.S. dollars at period-end exchange rates, and revenue, expenses and cash flows are translated using average exchange rates prevailing during the year. A significant portion of our non-United States subsidiaries have either the British pound, the euro or the Brazilian real as the functional currency, each of which experienced significant fluctuations against the U.S. dollar during 2016, 2015 and 2014 . Foreign currency translation gains and losses are recognized as a component of accumulated other comprehensive income (loss) in stockholders' equity and in the Consolidated Statements of Comprehensive Income in accordance with accounting guidance for foreign currency translation. We consider the majority of our investments in our foreign subsidiaries to be long-term in nature. Our non-United States exchange transaction gains (losses), including where transactions with our non-United States subsidiaries are not considered to be long-term in nature, are included within other income (expense) in Other, net on the Consolidated Statements of Income.

Reclassifications

Certain amounts in the prior year Consolidated Financial Statements and accompanying footnotes have been reclassified to conform to the current year's presentation primarily pursuant to the adoption of Accounting Standards Update ("ASU") 2015-03, *Simplifying the Presentation of Debt Issuance Costs* . As of December 31, 2015, approximately $ 19 million of current debt issuance costs have been reclassified from other current assets to long-term debt, less current portion and approximately $109 million of non-current debt issuance costs have been reclassified from other non-current assets to long-term debt, less current portion.

Use of Estimates

The preparation of the Consolidated Financial Statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reported period. The accounting estimates that require management's judgments include revenue recognition, revenue reserves, network access costs, network access cost dispute reserves, determination of the useful lives of long-lived assets, measurement and recognition of stock-based compensation expense, valuation of long-lived assets, goodwill and indefinite-lived intangible assets for purposes of impairment testing, valuation of asset retirement obligations, allowance for doubtful accounts, measurement of the fair value of assets acquired and liabilities assumed in business combinations, accruals for estimated tax and legal liabilities, and valuation allowance for deferred tax assets. Actual results could differ from these estimates under different assumptions or conditions and such differences could be material.

Revenue

Revenue is recognized monthly as the services are provided based on contractual amounts expected to be collected. Management establishes appropriate revenue reserves at the time services are rendered based on an analysis of historical credit activity to address, where significant, situations in which collection is not reasonably assured as a result of credit risk, potential billing disputes or other reasons. Actual results may differ from these estimates under different assumptions or conditions and these differences could be material.

Intercarrier compensation revenue is recognized when an interconnection agreement is in place with another carrier, or if an agreement has expired, when the parties have agreed to continue operating under the previous agreement until a new agreement is negotiated and executed, or at rates mandated by the Federal Communications Commission (the "FCC").

For certain sale and long-term indefeasible right of use, or IRU, contracts involving private line, wavelengths and dark fiber services, we may receive upfront payments for services to be delivered for a period of up to 25 years. In these situations, we defer the revenue and amortize it on a straight-line basis to earnings over the term of the contract.

Termination revenue is recognized when a customer discontinues service prior to the end of the contract period for which we had previously received consideration and for which revenue recognition was deferred. Termination revenue also is recognized when customers are required to make termination penalty payments to us to settle contractually committed purchase amounts that the customer no longer expects to meet or when a customer and we renegotiate a contract under which we are no longer obligated to provide services for consideration previously received and for which revenue recognition has been deferred.

We are obligated under dark fiber IRUs and other capacity agreements to maintain our network in efficient working order and in accordance with industry standards. Customers are obligated for the term of the agreement to pay for their allocable share of the costs for operating and maintaining the network. We recognize this revenue monthly as services are provided.

Our customer contracts require us to meet certain service level commitments. If we do not meet the required service levels, we may be obligated to provide credits, usually in the form of free service, for a short period of time. The credits are a reduction to revenue and, to date, have not been material.

Network Access Costs

Network Access Costs for the communications business include leased capacity, right-of-way costs, access charges, satellite transponder lease costs and other third party costs directly attributable to providing access to customer locations from our network, but excludes Network Related Expenses, and depreciation and amortization. Network Access Costs do not include any employee expenses or impairment expenses; these expenses are allocated to Network Related Expenses or Selling, General and Administrative Expenses.

We recognize the network access costs as they are incurred in accordance with contractual requirements. We dispute incorrect billings from our suppliers of network services. The most prevalent types of disputes include disputes for circuits that are not disconnected by the supplier on a timely basis, charges from suppliers for circuits that were not timely installed and incorrect rate or other inadequate information needed to determine the appropriate billing from the supplier. Depending on the type and complexity of the issues involved, it may and often does take several quarters to resolve the disputes. We establish appropriate network access costs reserves for disputed supplier billings based on an analysis of our historical experience in resolving disputes with our suppliers and regulatory analysis regarding certain supplier billing matters. Judgment is required in estimating the ultimate outcome of the dispute resolution process, as well as any other amounts that may be incurred to conclude the negotiations or settle any litigation. Actual results may differ from these estimates under different assumptions or conditions and these differences could be material.

Network Related Expenses

Network Related Expenses includes certain expenses associated with the delivery of services to customers and the operation and maintenance of our network, such as facility rent, utilities, maintenance and other costs, each related to the operation of our communications network, as well as salaries, wages and related benefits (including non-cash stock-based compensation expenses) associated with personnel who are responsible for the delivery of services, operation and maintenance of our communications network, and accretion expense on asset retirement obligations, but excludes depreciation and amortization.

Selling, General and Administrative Expenses

Selling, General and Administrative Expenses includes the salaries, wages and related benefits (including non-cash, stock-based compensation expenses) and the related costs of corporate and sales personnel, travel, insurance, non-network related rent, advertising, and other administrative expenses.

USF and Gross Receipts Taxes

The revenue recognition standards include guidance relating to any tax assessed by a governmental authority that is directly imposed on a revenue-producing transaction between a seller and a customer and may include, but is not limited to, gross receipts taxes and certain state regulatory fees. We record Universal Service Fund ("USF") contributions where we are the primary obligor for the taxes assessed in each jurisdiction where we do business on a gross basis in our Consolidated Statements of Income, but generally record gross receipts taxes and certain state regulatory fees billed to our customers on a net basis in our Consolidated Statements of Income. Total revenue and network access costs on the Consolidated Statements of Income include USF contributions totaling $357 million , $323 million and $234 million for the years ended December 31, 2016, 2015 and 2014 , respectively.

Stock-Based Compensation

We recognize the estimated fair value of stock-based compensation costs, net of an estimated forfeiture rate, over the requisite service period of the award, which is generally the vesting term or term for restrictions on transfer that lapse, as the case may be. We estimate forfeiture rates based on our historical experience for the type of award, adjusted for expected activities as necessary.

Income Taxes

We recognize deferred tax assets and liabilities for our United States and non-U.S. operations, for operating loss and other credit carry forwards and the expected tax consequences of temporary differences between the tax basis of assets and liabilities and their reported amounts using enacted tax rates in effect for the year the differences are expected to reverse. We record a valuation allowance to reduce the deferred tax assets to the amount that is more likely than not to be realized. This assessment requires judgment as to the likelihood and amounts of future taxable income by tax jurisdiction.

Cash and Cash Equivalents

We classify investments as cash equivalents if they are readily convertible to cash and have original maturities of three months or less at the time of acquisition. Cash and cash equivalents consist primarily of highly liquid investments in government and government agency securities and government money market funds issued or managed by financial institutions in the United States, Europe and Latin America and commercial paper depending on liquidity requirements. As of December 31, 2016 and 2015 , the carrying value of cash equivalents approximates fair value due to the short period of time to maturity.

Restricted Cash and Securities

Restricted cash and securities consists primarily of cash and investments that serve to collateralize our outstanding letters of credit and certain performance and operating obligations. Restricted cash and securities are recorded as current or non-current assets in the Consolidated Balance Sheets depending on the duration of the restriction and the purpose for which the restriction exists. Restricted securities are stated at cost which approximates fair value as of December 31, 2016 and 2015 .

Allowance for Doubtful Accounts

Trade accounts receivable are recorded at the invoiced amount and can bear interest. We establish an allowance for doubtful accounts for accounts receivable amounts that may not be collectible. We determine the allowance for doubtful accounts based on the aging of our accounts receivable balances, the credit quality of our customers and an analysis of our historical experience of bad debt write-offs. Accounts receivable balances are written off against the allowance for doubtful accounts after all means of collection have been exhausted and the potential for recovery is considered remote. We recognized bad debt expense, net of recoveries, of approximately $18 million in 2016 , $23 million in 2015 and $ 22 million in 2014 .

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation and amortization for our property, plant and equipment are computed using the straight-line method based on the following estimated useful lives:

Facility and Leasehold Improvements	15	-	40	years
Network Infrastructure (including fiber and conduit)	25	-	50	years
Operating Equipment	5	-	15	years
Furniture, Fixtures, Office Equipment and Other	3	-	7	years

We perform internal reviews to evaluate the depreciable lives of our property, plant and equipment annually, or more frequently if new facts and circumstances arise, that may affect management's original estimates. Due to the rapid changes in technology and the competitive environment, selecting the estimated economic life of telecommunications property, plant, and equipment requires a significant amount of judgment. Our internal reviews take into account input from our global engineering and network services personnel, actual usage, the physical condition of our property, plant, and equipment, industry data, and other relevant factors. In connection with our periodic review of the estimated useful lives of property, plant and equipment, we may determine that the period we expect to use certain assets is different than the remaining previously estimated useful lives.

Leasehold improvements are depreciated over the shorter of their estimated useful lives or lease terms that are reasonably assured.

We capitalize costs directly associated with expansions and improvements of our communications network and customer installations, including employee-related costs, and generally capitalize costs associated with network construction and provisioning of services. We amortize such costs over an estimated useful life of 3 to 5 years.

In addition, we continue to develop business support systems required for our business. The external direct costs of software, materials and services, and payroll and payroll-related expenses for employees directly associated with business support system development projects are capitalized. The total development costs of the business support system is amortized over an estimated useful life of 3 years .

Capitalized labor and related costs associated with employees and contract labor working on capital projects were approximately $271 million , $ 244 million and $ 187 million for the years ended December 31, 2016, 2015 and 2014 , respectively.

Asset Retirement Obligations

We recognize a liability for the estimated fair value of legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development and/or the normal operation of a long-lived asset in the period incurred. The fair value of the obligation is also capitalized as property, plant and equipment and then amortized over the estimated remaining useful life of the associated asset. Increases to the asset retirement obligation liability due to the passage of time are recognized as accretion expense and included within network related expenses. Changes in the liability due to revisions to the amount or timing of future cash flows are recognized by increasing or decreasing the liability with the offset adjusting the carrying amount of the related long-lived asset. To the extent that the downward revisions exceed the carrying amount of the related long-lived asset initially recorded when the asset retirement obligation liability was established, we record the remaining adjustment as a reduction to depreciation expense, to the extent of historical depreciation of the related long-lived asset, and then to network related expenses.

Goodwill and Indefinite-Lived Intangible Assets

Accounting guidance prohibits the amortization of goodwill and intangible assets with indefinite useful lives. We review goodwill and intangible assets with indefinite lives for impairment annually as of October 1st and whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable.

Our goodwill impairment review process considers the fair value of each reporting unit relative to its carrying value. If the fair value of the reporting unit exceeds its carrying value, goodwill is not impaired and no further testing is performed. If the carrying value of the reporting unit exceeds its fair value, then a second step must be performed, and the implied fair value of the reporting unit's goodwill must be determined and compared to the carrying value of the reporting unit's goodwill. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, then an impairment loss equal to the difference will be recorded. Prior to performing the two step evaluation, an assessment of qualitative factors may be performed to determine whether it is more likely than not that the fair value of a reporting unit exceeds the carrying value. If it is determined that it is unlikely that the carrying value exceeds the fair value, we are not required to complete the two step goodwill impairment evaluation.

At the time of each impairment assessment date in 2016, 2015, and 2014, our reporting units consisted of three regional operating units in: North America; Europe, the Middle East and Africa ("EMEA"); and Latin America. We conducted our annual goodwill impairment analysis as of October 1, and concluded that our goodwill was not impaired in 2016 and 2014. As a result of the deconsolidation of our Venezuelan subsidiary, we completed an assessment of the Latin American and our other reporting units' goodwill as of September 30, 2015 and concluded there was no impairment in 2015.

Our indefinite-lived intangible assets impairment review process compares the estimated fair value of the indefinite-lived intangible assets to their respective carrying values. If the fair value of the indefinite-lived intangible assets exceeds their carrying values, then the indefinite-lived intangible assets are not impaired. If the carrying value of the indefinite-lived intangible assets exceeds their fair value, then an impairment loss equal to the difference will be recorded. In accordance with applicable accounting guidance, an entity may assess qualitative factors to determine whether it is more likely than not that the fair value exceeds the carrying value prior to performing the two step evaluation. If it is determined that it is unlikely the carrying value exceeds the fair value, then the entity is not required to complete the indefinite-lived intangible assets impairment evaluation.

Long-Lived Assets Including Finite-Lived Intangible Assets

We amortize intangible assets with finite lives using the straight-line method over the estimated economic lives of the assets, ranging from 4 to 12 years .

We evaluate long-lived assets, such as property, plant and equipment and intangible assets with finite lives, for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. We assess the recoverability of the assets based on the undiscounted future cash flows the asset groups are expected to generate and recognize an impairment loss when estimated undiscounted future cash flows expected to result from the use of the assets plus net proceeds expected from disposition of the assets, if any, are less than the carrying value of the assets. If an asset is deemed to be impaired, the amount of the impairment loss is the excess of the asset's carrying value over its estimated fair value.

We conducted a long-lived asset impairment analysis in 2016, 2015 and 2014 and in each case concluded that our long-lived assets, including finite-lived intangible assets, were not impaired.

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash equivalents, accounts receivable, restricted cash and securities. We maintain our cash equivalents, restricted cash and securities with various financial institutions. These financial institutions are primarily located in the United States, Europe and Latin America and our policy is to limit exposure with any one institution. As part of our cash and risk management processes, we perform periodic evaluations of the relative credit standing of the financial institutions. We also have established guidelines relative to financial instrument credit ratings, diversification and maturities that seek to maintain safety and liquidity. Our investment strategy generally results in lower yields on investments but reduces the risk to principal in the short term prior to these funds being used in our business. Notwithstanding the devaluation of the Venezuelan bolivar, we have not experienced any material losses on financial instruments held at financial institutions.

We provide communications services to a wide range of wholesale and enterprise customers, ranging from well capitalized national carriers to small early stage companies primarily in the United States, Europe, and Latin America. Credit risk with respect to accounts receivable is generally diversified due to the large number of entities comprising our customer base and their dispersion across many different industries and geographical regions. We perform ongoing credit evaluations of our customers' financial condition and generally require no collateral from our customers, although letters of credit and deposits are required in certain limited circumstances. We have, from time to time, entered into agreements with value-added resellers and other channel partners to reach consumer and enterprise markets for voice services. We have policies and procedures in place to evaluate the financial condition of these resellers prior to initiating service to the final customer. We maintain an allowance for doubtful accounts based upon the expected collectability of accounts receivable. Due to our credit evaluation and collection process, bad debt expenses have not been significant; however, we are not able to predict changes in the financial stability of our customers. Any material change in the financial status of any one or a particular group of customers may cause us to adjust our estimate of the recoverability of receivables and could have a material effect on our results of operations. Fair values of accounts receivable approximate carrying amount due to the short period of time to collection.

A relatively small number of customers account for a significant percentage of our revenue. Our top ten customers accounted for approximately 16% , 16% and 17% of our revenue for the years ended December 31, 2016, 2015 and 2014 , respectively.

Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-09, *Improvements to Employee Share-Based Payment Accounting* , as part of its simplification initiative, which involves several aspects of accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The amendments in this update are effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted, but all of the amendments must be adopted in the same period.

We elected to early adopt ASU 2016-09 in the third quarter of 2016, which required adjustments to be reflected as of January 1, 2016, the beginning of the annual period that includes the interim period of adoption. Upon adoption, we recognized previously unrecognized excess tax benefits using the modified retrospective transition method, which resulted in a cumulative-effect adjustment of $ 42 million recorded to accumulated deficit as of January 1, 2016.

This ASU amended the definition of assumed proceeds when applying the treasury stock method of computing earnings per share to exclude the amount of excess tax benefits that would be recognized in additional paid-in capital. This amendment increased the amount of Diluted Weighted-Average Shares Outstanding, as noted in the table below.

The new presentation requirements for excess tax benefits to be shown on the statement of cash flows as an operating activity and presenting employee taxes paid where the employer withholds shares for tax-withholding purposes as a financing activity had no effect to any of the periods presented in our Consolidated Statements of Cash Flows as there had been no such activities in the Consolidated Statements of Cash Flow. We have elected to continue to estimate forfeitures expected to occur to determine the amount of compensation cost to be recognized in each period.

Adoption of the new standard also resulted in the recognition of excess tax benefits as a reduction to income tax expense of $22 million, or $0.06 per basic share, for 2016.

In April 2015, the FASB issued ASU 2015-03, *Simplifying the Presentation of Debt Issuance Costs* , which required debt issuance costs to be presented in the balance sheet as a direct deduction from the associated debt liability. The new guidance is effective retrospectively for public companies for fiscal years beginning after December 15, 2015, and interim periods within those years. It was effective for us on January 1, 2016, and, upon adoption, debt issuance costs capitalized in other current assets and other assets in the consolidated balance sheet were reclassified and presented as a reduction to current and noncurrent long-term debt. As of December 31, 2015, debt issuance costs, net of accumulated amortization, recognized in the Consolidated Balance Sheets totaled $128 million, of which $ 19 million were recorded in other current assets.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02, *Leases* (ASC 842), which requires entities that lease assets to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. This ASU will replace most existing leasing guidance in U.S. GAAP when it becomes effective. The new standard is effective for fiscal years beginning after December 15, 2018, and interim periods within those years. Early application is permitted. The standard requires the use of a modified retrospective transition method. We are evaluating the effect that ASU 2016-02 will have on our Consolidated Financial Statements and related disclosures, and expect the new guidance to significantly increase the reported assets and liabilities on our Consolidated Balance Sheets.

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update 2014-09, Revenue from Contracts with Customers, which amended the existing accounting standards for revenue recognition and requires an entity to recognize the amount of revenue it expects to be entitled to for the transfer of promised goods or services to customers. The ASU and subsequent amendments have been codified as ASC 606, *Revenue from Contracts with Customers* ("ASC 606"). In July 2015, the FASB deferred the effective date to annual reporting periods beginning after December 15, 2017, and interim reporting periods within those periods. Early adoption is permitted using the original effective date of annual reporting periods beginning after December 15, 2016, and interim reporting periods within those periods. The new guidance may be applied retrospectively to each prior period presented or prospectively with the cumulative effect recognized as of the date of initial adoption. We will not adopt ASC 606 early.

We are performing a comprehensive analysis of our revenue streams and contractual arrangements to identify the effects of ASC 606 on our consolidated financial statements and are developing new accounting and reporting policies, business and internal control processes and procedures to facilitate adoption of the standard. Because we currently have service contracts that contain a significant financing component that are not currently separately accounted for, we will be required to estimate and record incremental revenue and interest cost associated with these contractual terms. In addition, we will be required to capitalize, and subsequently amortize, commission costs associated with obtaining or fulfilling our customer contracts, which we do not currently defer and amortize. We will also have to comply with new revenue disclosure requirements. We are continuing to review and evaluate underlying contract information that will be used to support new accounting and disclosure requirements under ASC 606 and evaluate other matters that may result from adoption of the standard. We have not yet selected a transition method, as our method of transition may be affected by the CenturyLink Merger, which we expect will be completed in the third quarter of 2017, and subsequent integration activities completed prior to the January 1, 2018 ASC 606 adoption date.

(2) CenturyLink Merger

On October 31, 2016 , we entered into an agreement and plan of merger with CenturyLink, Inc., a Louisiana corporation, Wildcat Merger Sub 1 LLC, a Delaware limited liability company and an indirect wholly owned subsidiary of CenturyLink, and WWG Merger Sub LLC, a Delaware limited liability company and an indirect wholly owned subsidiary of CenturyLink, pursuant to which, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, we will be acquired by CenturyLink in a cash and stock transaction, including the assumption of our debt.

Under the Merger Agreement, at the effective time of the merger of Merger Sub 1 with and into us (the "Initial Merger"), (i) each issued and outstanding share of our common stock, will be converted into 1.4286 shares (the "Stock Consideration") of CenturyLink's common stock par value $1.00 per share and (ii) the right to receive $26.50 in cash (the "Cash Consideration" and, together with the Stock Consideration, the "Merger Consideration"). In addition, the Merger Agreement provides that at the effective time of the CenturyLink Merger, each issued and outstanding restricted stock unit award granted prior to April 1, 2014 and each restricted stock unit award granted to a non-employee member of our Board of Directors will be exchanged for the Merger Consideration. Further, at the effective time of the CenturyLink Merger, each issued and outstanding restricted stock unit award granted on or after April 1, 2014, other than those granted to non-employee members of our Board of Directors, will be assumed and converted automatically into a restricted stock unit award of CenturyLink common stock that will be subject to the same service-based vesting conditions as applicable to such awards prior to the transaction (but not any performance-based vesting conditions, which will be deemed satisfied based on forecasted and adjusted results through the closing of the transaction (as determined by Compensation Committee of our Board of Directors)). The CenturyLink Merger is subject to the receipt of certain regulatory approvals, including expiration or termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act, review by the U.S. Federal Communications Commission, certain state regulatory approvals and other customary closing conditions.

The transaction is also subject to the approval of CenturyLink shareholders and our stockholders. CenturyLink has entered into a voting agreement with STT Crossing Ltd. (a wholly owned subsidiary of ST Telemedia), holder of approximately 18 percent of our outstanding common stock, pursuant to which they have agreed to vote their Level 3 shares in favor of the transaction.

(3) Events Associated with the Acquisition of tw telecom inc.

On October 31, 2014 , we completed our acquisition of tw telecom and tw telecom became our indirect, wholly owned subsidiary through a tax-free, stock and cash reorganization. As a result of the acquisition of tw telecom, (1) each issued and outstanding share of common stock of tw telecom was exchanged for 0.7 shares of our common stock and $10 in cash (together the "acquisition consideration"); (2) the outstanding stock options of tw telecom were canceled and the holders received the acquisition consideration, net of aggregate per share exercise price; (3) each restricted stock unit award of tw telecom was immediately vested and canceled and the holders received the acquisition consideration; and (4) each restricted stock unit of tw telecom was immediately vested and canceled and holders received the acquisition consideration.

In connection with the closing of the acquisition, Level 3 Financing, Inc., a wholly owned subsidiary, amended its existing credit agreement to incur an additional $2 billion of borrowings through an additional Tranche (the "Tranche B 2022 Term Loan"). The aggregate net proceeds of the Tranche B 2022 Term Loan were used to finance the cash portion of the acquisition consideration payable to tw telecom's stockholders and to refinance certain existing indebtedness of tw telecom, including fees and premiums, in connection with the closing of the acquisition (see Note 10 - Long-Term Debt for additional information). In addition, the net proceeds from the issuance of $1 billion of 5.375% Senior Notes due 2022 raised in August 2014 (see Note 10 - Long-Term Debt) were used to finance the cash portion of the acquisition consideration payable to tw telecom stockholders and to refinance certain existing indebtedness of tw telecom, including fees and premiums, in connection with the closing of the acquisition.

On October 30, 2014, we increased the number of authorized shares of common stock to 433,333,333 . As a result of the acquisition, we issued approximately 96.9 million shares of our common stock to former holders of tw telecom common shares, stock options, restricted stock awards and restricted stock units. In addition, we called for redemption and discharged or repaid approximately $1.793 billion of tw telecom's outstanding consolidated debt including premiums of $154 million .

Based on the number of our shares issued, our closing stock price of $46.91 on October 31, 2014, the cash paid to the former holders of tw telecom common stock and the $2.1 billion of debt of tw telecom called for redemption and discharged or repaid, the aggregate consideration for acquisition accounting, including assumed capital leases of $152 million , approximated $8.1 billion .

The premium we paid in this transaction is attributable to strategic benefits, as the transaction further solidified our position as a premier global communications provider to the enterprise, government and carrier market, combining tw telecom's extensive local operations and assets in North America with our global assets and capabilities. tw telecom's business model is directly aligned with our initiatives for growth, which include building managed solutions to meet customer needs through an advanced IP/optical network.

The goodwill associated with this transaction is not deductible for income tax purposes except that certain deductible goodwill of tw telecom will continue to be deductible following the acquisition.

Our combined results of operations with tw telecom are included in our consolidated results of operations beginning in November 2014. The assets acquired and liabilities assumed of tw telecom were recognized at their acquisition date fair value. The purchase price allocation of acquired assets and assumed liabilities, including the assignment of goodwill to reporting units, was completed in the fourth quarter of 2015. The following is the final allocation of the purchase price.

	Purchase Price Allocation	
	(dollars in millions)	
Assets:		
Cash, Cash Equivalents and Restricted Cash	$	309
Property, Plant and Equipment		1,553
Goodwill		5,181
Identifiable Intangible Assets		1,263
Other Assets		140
Total Assets		8,446
Liabilities:		
Long-Term Debt		(2,099)
Deferred Revenue		(57)
Other Liabilities		(279)
Total Liabilities		(2,435)
Total Consideration to be Allocated	$	6,011

As a result of new information available since the acquisition date, we made certain immaterial adjustments to the preliminary purchase price allocation during the first quarter of 2015, which have been reflected in the above table. The primary adjustment was a result of a single change in the purchase price allocation of $60 million related to the estimated value associated with the identifiable intangible assets and goodwill.

The following unaudited pro forma financial information presents our combined results with tw telecom as if the completion of the acquisition had occurred as of January 1, 2014 (dollars in millions, except per share data).

	Year Ended December 31,	
	2014	
Total Revenue	$	8,123
Net Income	$	149
Net Income per Share - Basic	$	0.44
Net Income per Share - Diluted	$	0.44

These pro forma results include certain adjustments, primarily due to increases in depreciation and amortization expense due to fair value adjustments of tangible and intangible assets, increases in interest expense due to our issuance of incremental debt to finance cash consideration, partially offset by the refinancing of tw telecom debt that had higher interest rates than the incremental financing, and to eliminate historical transactions between us and tw telecom. The unaudited pro forma information is not intended to represent or be indicative of our actual results of operations that would have been reported had the acquisition been completed on January 1, 2014, nor is it representative of our future operating results. The pro forma information does not include any operating efficiencies or cost savings that we achieved with respect to combining the companies.

Acquisition related costs include transaction costs such as legal, accounting, valuation and other professional services as well as integration costs such as severance and retention. Acquisition related costs have been recorded in Network Related Expenses and Selling, General and Administrative Expenses in our Consolidated Statements of Income. We incurred total acquisition related transaction and integration costs of approximately $81 million in 2014 and $32 million in 2015.

(4) Earnings Per Share

We compute basic earnings per share by dividing net income for the period by the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share is computed by dividing the net income for the period by the weighted average number of shares of common stock outstanding during the period and including the dilutive effect of common stock that would be issued assuming conversion or exercise of outstanding convertible notes and stock-based compensation awards.

The effect of approximately 3 million total restricted stock units ("RSUs") and performance restricted stock units ("PRSUs") outstanding at December 31, 2016, has been included in the computation of diluted earnings per share for the year ended December 31, 2016. Less than 1 million of PRSUs granted in 2016 were excluded from the computation of diluted earnings per share for the year ended December 31, 2016, as they were contingently issuable and no shares would have been issued if this period was the end of the contingency period.

The effect of approximately 3 million and 4 million total outperform stock appreciation rights ("OSOs") and RSUs outstanding at December 31, 2015 and 2014, respectively have been included in the computation of diluted earnings per share for the year ended December 31, 2015 and 2014, respectively. PRSUs granted in 2015 were excluded from the computation of diluted earnings per share for the year ended December 31, 2015 and PRSUs granted in 2014 were excluded from the computation of diluted earnings per share for the year ended December 31, 2014, as they were contingently issuable and no shares would have been issued if these periods were the end of the contingency period.

The effect of approximately 17 million shares issuable pursuant to the various series of convertible notes outstanding at December 31, 2014, have not been included in the computation of diluted earnings per share because their inclusion would have been anti-dilutive to the computation.

(5) Property, Plant and Equipment

The components of our property, plant and equipment as of December 31, 2016 and 2015 are as follows (dollars in millions):

	Cost	Accumulated Depreciation	Net
December 31, 2016			
Land	$ 179	$ —	$ 179
Land Improvements	77	(58)	19
Facility and Leasehold Improvements	2,679	(1,447)	1,232
Network Infrastructure	9,110	(3,899)	5,211
Operating Equipment	8,846	(5,626)	3,220
Furniture, Fixtures and Office Equipment	241	(196)	45
Other	26	(23)	3
Construction-in-Progress	230	—	230
	$ 21,388	$ (11,249)	$ 10,139
December 31, 2015			
Land	$ 180	$ —	$ 180
Land Improvements	76	(53)	23
Facility and Leasehold Improvements	2,582	(1,352)	1,230
Network Infrastructure	8,979	(3,669)	5,310
Operating Equipment	7,988	(5,079)	2,909
Furniture, Fixtures and Office Equipment	242	(189)	53
Other	28	(23)	5
Construction-in-Progress	168	—	168
	$ 20,243	$ (10,365)	$ 9,878

Depreciation expense was $1.039 billion in 2016 , $939 million in 2015 and $713 million in 2014 .

(6) Asset Retirement Obligations

Our asset retirement obligations consist of legal requirements to remove certain of our network infrastructure at the expiration of the underlying right-of-way ("ROW") term and restoration requirements for leased facilities. We recognize our estimate of the fair value of our asset retirement obligations in the period incurred in other long-term liabilities. The fair value of the asset retirement obligation is also capitalized as property, plant and equipment and then depreciated over the estimated remaining useful life of the associated asset.

The following table provides asset retirement obligation activity for the years ended December 31, 2016 and 2015 (dollars in millions):

	2016	2015
Asset retirement obligation at January 1	$ 90	$ 85
Accretion expense	10	9
Liabilities settled	(9)	(8)
Revision in estimated cash flows	—	5
Effect of foreign currency rate change	(2)	(1)
Asset retirement obligation at December 31	$ 89	$ 90

(7) Other Intangible Assets

Other intangible assets as of December 31, 2016 and 2015 were as follows (dollars in millions):

	Gross Carrying Amount	Accumulated Amortization	Net
December 31, 2016			
Finite-Lived Intangible Assets:			
Customer Contracts and Relationships	$ 1,973	$ (1,113)	$ 860
Trademarks	55	(55)	—
Patents and Developed Technology	229	(189)	40
	2,257	(1,357)	900
Indefinite-Lived Intangible Assets:			
Trade Name	15	—	15
	$ 2,272	$ (1,357)	$ 915
December 31, 2015			
Finite-Lived Intangible Assets:			
Customer Contracts and Relationships	$ 1,975	$ (932)	$ 1,043
Trademarks	55	(55)	—
Patents and Developed Technology	230	(161)	69
	2,260	(1,148)	1,112
Indefinite-Lived Intangible Assets:			
Trade Name	15	—	15
	$ 2,275	$ (1,148)	$ 1,127

During the fourth quarter of 2016 and 2015 , we conducted our long-lived assets and indefinite-lived intangible assets impairment analysis and concluded that there was no impairment in 2016 and 2015 .

Finite-lived intangible assets amortization expense was $211 million in 2016 , $227 million in 2015 and $95 million in 2014 .

At December 31, 2016 , the weighted average remaining useful lives of our finite-lived intangible assets was 4.8 years in total; 4.9 years for customer contracts and relationships and 2.8 years for patents and developed technology.

As of December 31, 2016 , estimated amortization expense for our finite-lived intangible assets over the next five years and thereafter is as follows (dollars in millions):

2017	$	196
2018		193
2019		181
2020		166
2021		143
Thereafter		21
	$	900

(8) Restructuring Charges

Employee Separations

Changing economic and business conditions as well as organizational structure optimization efforts have caused us to initiate from time to time various workforce reductions resulting in involuntary employee terminations. We also have initiated workforce reductions resulting from the integration of previously acquired companies.

During 2015 and 2014, as part of the tw telecom acquisition and to improve organizational effectiveness, we initiated workforce reductions. Restructuring charges totaled $24 million and $45 million in 2015 and 2014, respectively, of which $8 million and $11 million in 2015 and 2014, respectively, were recorded in Network Related Expenses and $16 million and $34 million in 2015 and 2014, respectively, were recorded in Selling, General and Administrative Expenses. Workforce reductions were not material in 2016.

As of December 31, 2016 and 2015 , we had $3 million and $4 million , respectively, of employee termination liabilities.

Facility Closings

We also have accrued contract termination costs of $5 million and $11 million as of December 31, 2016 and 2015 , respectively, for facility lease costs that we continue to incur without economic benefit. Accrued contract termination costs are recorded in other liabilities (current and non-current) in the Consolidated Balance Sheets. We expect to pay the majority of these costs through 2020 . We did no t recognize any charge in 2016 , and recognized a charge of approximately $3 million and a charge of less than $1 million in 2015 and 2014 , respectively, as a result of facility lease costs associated with facility closing. We record charges for contract termination costs within Network Related Expenses and Selling, General and Administrative Expenses in the Consolidated Statements of Income.

(9) Fair Value of Financial Instruments

Our financial instruments consist of cash and cash equivalents, restricted cash and securities, receivables, accounts payable, capital leases, other liabilities, and long-term debt (including the current portion). The carrying values of cash and cash equivalents, restricted cash and securities, receivables, accounts payable, capital leases and other liabilities approximated their fair values at December 31, 2016 and 2015 .

GAAP defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements and disclosures for assets and liabilities required to be recorded at fair value, we consider the principal or most advantageous market in which we would transact and consider assumptions that market participants would use when pricing the asset or liability, such as interest and foreign exchange rates, transfer restrictions, and risk of nonperformance.

Fair Value Hierarchy

GAAP establishes a fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The fair value measurement of each class of assets and liabilities is dependent upon its categorization within the fair value hierarchy, based upon the lowest level of input that is significant to the fair value measurement of each class of asset and liability. GAAP establishes three levels of inputs that may be used to measure fair value:

Level 1 — Unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 — Unadjusted quoted prices for similar assets or liabilities in active markets, or unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable for the asset or liability.

Level 3 — Unobservable inputs for the asset or liability.

We recognize transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers within the fair value hierarchy during each of the years ended December 31, 2016 and 2015 .

The table below presents the fair values for our long-term debt as well as the input levels used to determine these fair values as of December 31, 2016 and 2015 :

			Fair Value Measurement Using			
	Total Carrying Value in Consolidated Balance Sheets		Unadjusted Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)		Significant Other Observable Inputs (Level 2)	
(dollars in millions)	December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
Liabilities Not Recorded at Fair Value in the Financial Statements:						
Long-term Debt, including the current portion:						
Term Loans	$ 4,566	$ 4,556	$ 4,671	$ 4,570	$ —	$ —
Senior Notes	6,135	6,126	6,283	6,298	—	—
Capital Leases and Other	183	199	—	—	183	199
Total Long-term Debt, including the current portion:	$ 10,884	$ 10,881	$ 10,954	$ 10,868	$ 183	$ 199

We do not have any assets or liabilities where the fair value is measured using significant unobservable inputs (Level 3).

Term Loans

The fair value of the Term Loans referenced above was approximately $4.7 billion and $4.6 billion at December 31, 2016 and 2015 , respectively. The fair value of each loan is based on quoted prices. Each loan tranche is actively traded.

Senior Notes

The fair value of the Senior Notes referenced above was approximately $6.3 billion and $6.3 billion at December 31, 2016 and 2015 , respectively, based on quoted prices. Each series of notes is actively traded.

Capital Leases

The fair value of our capital leases are determined by discounting anticipated future cash flows derived from the contractual terms of the obligations and observable market interest and foreign exchange rates.

(10) Long-Term Debt

The following table summarizes our long-term debt (amounts in millions):

	Date of				December 31, 2016	December 31, 2015
	Issuance/ Amendment	Maturity	Interest Payments	Interest Rate	Amount	Amount
Senior Secured Term Loans:						
Borrowed by Level 3 Financing, Inc.						
Tranche B-III 2019 Term Loan (1)(4)	Aug 2013	Aug 2019	Quarterly	LIBOR +3.00%	$ 815	$ 815
Tranche B 2020 Term Loan (1)(4)	Oct 2013	Jan 2020	Quarterly	LIBOR +3.00%	1,796	1,796
Tranche B-II 2022 Term Loan (1)(4)	May 2015	May 2022	Quarterly	LIBOR +2.75%	2,000	2,000
Senior Notes:						
Issued by Level 3 Financing, Inc.						
Floating Rate Senior Notes due 2018 (2)(4)	Nov 2013	Jan 2018	May/Nov	6-Month LIBOR +3.50%	300	300
7% Senior Notes due 2020 (2)	Aug 2012	Jun 2020	Jun/Dec	7.000%	—	775
6.125% Senior Notes due 2021 (2)	Nov 2013	Jan 2021	Apr/Oct	6.125%	640	640
5.375% Senior Notes due 2022 (2)	Aug 2014	Aug 2022	May/Nov	5.375%	1,000	1,000
5.625% Senior Notes due 2023 (2)	Jan 2015	Feb 2023	Jun/Dec	5.625%	500	500
5.125% Senior Notes due 2023 (2)	Apr 2015	May 2023	Mar/Sept	5.125%	700	700
5.375% Senior Notes due 2025 (2)	Apr 2015	May 2025	Mar/Sept	5.375%	800	800
5.375% Senior Notes due 2024 (2)	Nov 2015	Jan 2024	Jan/Jul	5.375%	900	900
5.25% Senior Notes due 2026 (2)	Mar 2016	Mar 2026	Apr/Oct	5.250%	775	—
Issued by Level 3 Communications, Inc.						
5.75% Senior Notes due 2022 (3)	Dec 2014	Dec 2022	Mar/Sept	5.750%	600	600
Capital Leases and Other Debt					183	199
Total Debt Obligations					11,009	11,025
Unamortized discounts					(13)	(16)
Unamortized debt issuance costs					(112)	(128)
Current Portion					(7)	(15)
Total Long-Term Debt					$ 10,877	$ 10,866

(1) The term loans are secured obligations and guaranteed by Level 3 Communications, Inc. and Level 3 Communications, LLC and certain other subsidiaries.
(2) The notes are fully and unconditionally guaranteed on an unsubordinated unsecured basis by Level 3 Communications, Inc. and Level 3 Communications, LLC.
(3) The notes were not guaranteed by any of Level 3 Communications, Inc.'s subsidiaries.
(4) The Tranche B-III 2019 Term Loan and the Tranche B 2020 Term Loan each had an interest rate of 4.000% as of December 31, 2016 and 2015 . The Tranche B-II 2022 Term Loan had an interest rate of 3.500% as of December 31, 2016 and 2015 . The Floating Rate Senior Notes due 2018 had an interest rate of 4.762% as of December 31, 2016 and 4.101% as of December 31, 2015 . The interest rate on the Tranche B-III 2019 Term Loan and the Tranche B 2020 Term Loan are set with a minimum LIBOR of 1.00% , and the Tranche B-II 2022 Term Loan is set with a minimum LIBOR of 0.75% .

Senior Secured Term Loans

As of January 1, 2014, Level 3 Financing, Inc., our direct wholly owned subsidiary ("Level 3 Financing") had a senior credit facility consisting of $815 million Tranche B-III Term Loan due 2019 and $1.796 billion Tranche B Term Loan due 2020.

On October 31, 2014, Level 3 Financing entered into a ninth amendment agreement to the Existing Credit Agreement to incur $2 billion in aggregate borrowings under the Existing Credit Agreement through the creation of a new Tranche B 2022 Term Loan (the "Tranche B 2022 Term Loan"). The Tranche B 2022 Term Loan included an upfront payment to the lenders of 0.75% of par and bears interest equal to LIBOR plus 3.50% with LIBOR set at a minimum of 1.00% .

On May 8, 2015, Level 3 Financing refinanced its existing $2 billion senior secured Tranche B 2022 Term Loan under a tenth amendment agreement to its Existing Credit Agreement through the creation of a new senior secured Tranche B-II 2022 term loan in the aggregate principal amount of $2 billion (the "Tranche B-II 2022 Term Loan"). The Tranche B-II 2022 Term Loan has an interest rate of LIBOR plus 2.75% , with a minimum LIBOR of 0.75% , and will mature on May 31, 2022. The Tranche B-II 2022 Term Loan was priced to lenders at par, with the payment to the lenders of an upfront fee of 25 basis points at closing. As a result of this transaction, we recognized a loss on the refinancing of approximately $27 million .

Senior Notes

We completed several offerings and refinancing of senior notes in 2016 and 2015. All of the notes pay interest semiannually, and allow for the redemption of the notes at the option of the issuer upon not less than 30 or more than 60 days' prior notice by paying the greater of 101% of the principal amount or a "make-whole" amount, plus accrued interest. In addition, the notes also have a provision that allows for an additional right of optional redemption using cash proceeds received from the sale of equity securities. For specific details of these features and requirements, including the applicable premiums and timing, refer to the indentures for the respective senior notes in connection with the original issuances.

5.375% Senior Notes due 2022

On August 12, 2014, Level 3 Escrow II, Inc. ("Level 3 Escrow"), an indirect, wholly owned subsidiary of Level 3 Communications, Inc., issued $1.0 billion in aggregate principal amount of its 5.375% Senior Notes due 2022 (the "5.375% Senior Notes due 2022"). The 5.375% Senior Notes due 2022 were assumed by Level 3 Financing and the proceeds were used to refinance certain existing indebtedness of tw telecom.

5.75% Senior Notes due 2022

On December 1, 2014, we issued a total of $600 million aggregate principal amount of our 5.75% Senior Notes due 2022 (the "5.75% Senior Notes"). The net proceeds from the offering of the notes, together with cash on hand were used to redeem all of the outstanding 11.875% Senior Notes due 2019 issued by Level 3 Financing, including the payment of accrued interest and applicable premiums, and in connection with that redemption, the indenture relating to the 11.875% Senior Notes due 2019 was discharged on December 31, 2014. Level 3 Financing redeemed its 11.875% Senior Notes due 2017 at a price of 106.859% of the principal amount and recognized a loss on extinguishment of debt of $53 million .

5.625% Senior Notes due 2023

In January 2015, Level 3 Financing issued $500 million in aggregate principal amount of its 5.625% Senior Notes due 2023 (the " 5.625% Senior Notes"). The net proceeds from the offering of the 5.625% Senior Notes, together with cash on hand, were used to redeem, on April 1, 2015, all of Level 3 Financing's approximately $500 million aggregate principal amount of 9.375% Senior Notes due 2019, including accrued interest, applicable premiums and expenses. Total loss on extinguishment of debt related to the 9.375% Senior Notes due 2019 was $36 million .

5.125% Senior Notes due 2023 and 5.375% Senior Notes due 2025

In April 2015, Level 3 Financing issued $700 million in aggregate principal amount of its 5.125% Senior Notes due 2023 (the " 5.125% Senior Notes") and $800 million in aggregate principal amount of its 5.375% Senior Notes due 2025 (the " 5.375% Senior Notes due 2025"). The net proceeds from the offering of the 5.125% Senior Notes and 5.375% Senior Notes due 2025, together with cash on hand, were used to redeem all $1.2 billion aggregate principal amount of Level 3 Financing's 8.125% Senior Notes due 2019 and all $300 million aggregate principal amount of our 8.875% Senior Notes due 2019. Total loss on extinguishment of debt related to the 8.125% Senior Notes due 2019 was $82 million and total loss on extinguishment of debt related to the 8.875% Senior Notes due 2019 was $18 million .

5.375% Senior Notes due 2024

On November 13, 2015, Level 3 Financing issued $900 million in aggregate principal amount of its 5.375% Senior Notes due 2024 (the " 5.375% Senior Notes due 2024"). The net proceeds from the offering of the 5.375% Senior Notes due 2014, together with cash on hand, were used to redeem all $900 million aggregate principal amount of Level 3 Financing's 8.625% Senior Notes due 2020. Total loss on modification and extinguishment of debt related to the 8.625% Senior Notes due 2020 was approximately $55 million .

7% Convertible Senior Notes

During the fourth quarter of 2014, certain holders converted approximately $142 million of the 7% Convertible Senior Notes to common equity. Upon conversion, we issued an aggregate of approximately 5 million shares of our common stock, representing the approximately 37 shares per $1,000 note into which the notes were then convertible.

During the first quarter of 2015, holders converted the remaining $333 million aggregate principal amount of our 7% Convertible Senior Notes due 2015 to common equity. Upon conversion, we issued an aggregate of approximately 12 million shares of our common stock, representing the approximately 37 shares per $1,000 note into which the notes were then convertible.

5.25% *Senior Notes due 2026*

On March 22, 2016, Level 3 Financing issued $775 million in aggregate principal amount of its 5.25% Senior Notes due 2026 (the " 5.25% Senior Notes due 2026").

The 5.25% Senior Notes due 2026 were not originally registered under the Securities Act of 1933, as amended. A registration statement with respect to these notes has been filed with the Securities and Exchange Commission, and became effective on February 23, 2017.

On April 21, 2016, all of the outstanding principal amount of the 7% Senior Notes due 2020 was redeemed at a redemption price equal to 104.138% of the principal amount, along with accrued and unpaid interest to but excluding the redemption date. To fund the redemption of these notes, Level 3 Financing used the net proceeds, along with cash on hand, from the March 22, 2016 issuance of its 5.25% Senior Notes due 2026. We recognized a loss on modification and extinguishment of debt of approximately $40 million in Other Expense in the second quarter of 2016 as a result of the redemption of the 7% Senior Notes due 2020.

Capital Leases

As of December 31, 2016 , we had $183 million of capital leases. We lease property, equipment, certain dark fiber facilities and metro fiber under non-cancelable IRU agreements that are accounted for as capital leases. Interest rates on these capital leases approximated 5.8% on average as of December 31, 2016 .

Debt Issuance Costs

For the years ended December 31, 2016 , 2015 and 2014 , we deferred debt issuance costs of $11 million , $50 million and $49 million , respectively, in connection with debt issuances, that are being amortized to interest expense over the respective terms of the debt. At December 31, 2016 and 2015 , there was $112 million and $128 million , respectively, of unamortized debt issuance costs.

Covenant Compliance

At December 31, 2016 and 2015 , we were in compliance with the financial covenants on all outstanding debt issuances.

Long-Term Debt Maturities

Aggregate future contractual maturities of long-term debt and capital leases (excluding discounts and debt issuance costs) were as follows as of December 31, 2016 (dollars in millions):

2017	$	7
2018		306
2019		822
2020		1,804
2021		650
Thereafter		7,420
	$	11,009

(11) Accumulated Other Comprehensive Loss

The accumulated balances for each classification of other comprehensive loss are as follows:

(dollars in millions)	Net Foreign Currency Translation Adjustment	Net Defined Benefit Pension Plans	Total
Balance at January 1, 2014	$ 67	$ (31)	$ 36
Other comprehensive loss before reclassifications	(178)	(9)	(187)
Amounts reclassified from accumulated other comprehensive loss	—	4	4
Balance at December 31, 2014	(111)	(36)	(147)
Other comprehensive income (loss) before reclassifications	(162)	6	(156)
Amounts reclassified from accumulated other comprehensive loss	—	2	2
Balance at December 31, 2015	(273)	(28)	(301)
Other comprehensive loss before reclassifications	(80)	(7)	(87)
Amounts reclassified from accumulated other comprehensive loss	—	1	1
Balance at December 31, 2016	$ (353)	$ (34)	$ (387)

(12) Employee Benefits and Stock-Based Compensation

We record non-cash compensation expense for our performance restricted stock units, restricted stock units, 401(k) matching contributions and prior to October 1, 2016, outperform stock appreciation rights.

The following table summarizes non-cash compensation expense and capitalized non-cash compensation for each of the three years ended December 31, 2016, 2015 and 2014 (dollars in millions):

	2016	2015	2014
Outperform Stock Appreciation Rights	$ 1	$ 6	$ 8
Restricted Stock Units	76	65	34
Performance Restricted Stock Units	43	35	14
401(k) Match Expense	37	36	23
Restricted Stock Unit Bonus Grant	—	—	(5)
	157	142	74
Capitalized Non-Cash Compensation	(1)	(1)	(1)
	$ 156	$ 141	$ 73

We capitalize non-cash compensation for those employees directly involved in the construction of the network, installation of services for customers or the development of business support systems.

OSOs and restricted stock units are granted under the Level 3 Communications, Inc. Stock Incentive Plan, as amended (the "Stock Plan"), which term extends through May 21, 2025. The Stock Plan provides for accelerated vesting of stock awards upon retirement if an employee meets certain age and years of service requirements and certain other requirements. Under the Stock Compensation guidance, if an employee meets the age and years of service requirements under the accelerated vesting provision, the award would be expensed at grant or expensed over the period from the grant date to the date the employee meets the requirements, even if the employee has not actually retired. We recognized non-cash compensation expense for employees that met the age and years of service requirements for accelerated vesting at retirement of $8 million , $14 million and $4 million in 2016, 2015 and 2014 , respectively.

Outperform Stock Appreciation Rights

OSOs were awarded through the end of 2013, and were outstanding through October 2016. Our OSO program was designed so that our stockholders would receive a market return on their investment before OSO holders receive any return on their OSOs. We believe that the OSO program directly aligned management's and stockholders' interests by basing stock option value on our ability to outperform the market in general, as measured by the Standard & Poor's ("S&P") 500® Index. Participants in the OSO program did not realize any value from awards unless our common stock price outperformed the S&P 500® Index during the life of the grant. When the stock price gain was greater than the corresponding gain on the S&P 500® Index, the value received for awards under the OSO plan was based on a formula involving a multiplier related to the level by which our common stock outperformed the S&P 500® Index. To the extent that Level 3's common stock outperformed the S&P 500® Index, the value of OSO units to a holder exceeded the value of non-qualified stock options.

The initial strike price, as determined on the day prior to the OSO grant date, was adjusted over time (the "Adjusted Strike Price"), until the settlement date. The adjustment was an amount equal to the percentage appreciation or depreciation in the value of the S&P 500® Index from the date of grant to the date of settlement. The value of the OSO increased for increasing levels of outperformance. OSO units had a multiplier range from zero to four depending upon the performance of Level 3 common stock relative to the S&P 500® Index as shown in the following table.

If Level 3 Stock Outperforms the S&P 500® Index by:	Then the Pre-multiplier Gain Multiplied by a Success Multiplier of:
0% or Less	—
More than 0% but Less than 11%	Outperformance percentage multiplied by 4/11
11% or More	4.00

The Pre-multiplier Gain was the Level 3 common stock price minus the Adjusted Strike Price on the date of settlement.

Upon settlement of an OSO, we delivered to the grantee the difference between the fair market value of a share of Level 3 common stock as of the day prior to the settlement date, less the Adjusted Strike Price (the "Exercise Consideration"). The Exercise Consideration may be paid in cash, Level 3 common stock or any combination of cash or Level 3 common stock at our discretion. The number of shares of Level 3 common stock delivered to the grantee was determined by dividing the Exercise Consideration to be paid in Level 3 common stock by the fair market value of a share of Level 3 common stock as of the date prior to the settlement date. Fair market value was defined in the OSO agreement as the closing price per share of Level 3 common stock on the national securities exchange on which the common stock is traded. Settlement of the OSO units did not require any cash outlay by the employee.

OSO units had a three year life and settled 100% on the third anniversary of the date of the award. Recipients had no discretion on the timing to exercise OSO units, thus the expected life of all such OSO units was three years.

Transactions involving OSO units awarded are summarized in the table below. The Option Price Per Unit identified in the table below represents the initial strike price, as determined on the day prior to the OSO grant date for those grants.

	Units	Initial Strike Price Per Unit		Weighted Average Initial Strike Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Term (years)
					(in millions)	
Balance January 1, 2014	2,148,865	$ 14.10	$ 36.60	$ 23.99	$ 31.6	1.46
OSOs granted	—	$ —	$ —	$ —		
OSOs forfeited	(52,901)	$ 16.99	$ 27.53	$ 22.99		
OSOs expired	(106,844)	$ 36.60	$ 36.60	$ 36.60		
OSOs exercised	(771,251)	$ 14.70	$ 27.53	$ 24.26		
Balance December 31, 2014	1,217,869	$ 16.99	$ 27.53	$ 22.76	$ 88.0	0.90
OSOs granted	—	$ —	$ —	$ —		
OSOs forfeited	(12,945)	$ 20.29	$ 26.69	$ 22.81		
OSOs expired	—	$ —	$ —	$ —		
OSOs exercised	(589,944)	$ 22.15	$ 22.97	$ 22.32		
Balance December 31, 2015	614,980	$ 20.29	$ 26.69	$ 22.77	$ 48.5	0.37
OSOs granted	—	$ —	$ —	$ —		
OSOs forfeited	(6,875)	$ 20.29	$ 26.69	$ 26.03		
OSOs expired	—	$ —	$ —	$ —		
OSOs exercised	(608,105)	$ 20.29	$ 26.69	$ 22.73		
Balance December 31, 2016	—					

In the table above, the weighted average initial strike price represents the values used to calculate the theoretical value of OSO units on the grant date and the intrinsic value represents the value of OSO units that outperformed the S&P 500® Index as of December 31, 2015 and 2014, respectively.

The total realized value of OSO units settled was $14 million , $13 million and $19 million for the years ended December 31, 2016, 2015 and 2014 , respectively. We issued 992,446 , 622,755 and 732,593 shares of Level 3 common stock upon the exercise of OSO units for the years ended December 31, 2016, 2015 and 2014 , respectively. The number of shares of Level 3 common stock issued upon settlement of an OSO unit varied based upon the relative performance of the Level 3 common stock price and the S&P 500® Index between the initial grant date and settlement date of the OSO.

Restricted Stock Units and Performance Restricted Stock Units

Restricted stock units are generally granted annually on July 1 to certain eligible recipients, including the Board of Directors, at no cost. Restrictions on transfer lapse over one to four year periods.

In April 2014, we began granting Performance Restricted Stock Units ("PRSUs"). PRSUs are designed to provide participants with a long-term stake in our success with both retention and performance components. Under these awards, a participant becomes vested in a number of PRSUs based on our achievement of specified levels of financial performance during the performance period set forth in the applicable award letter issued pursuant to the award agreement, so long as the participant remains continuously employed by us until the applicable scheduled vesting date, subject to certain change in control provisions as outlined in the award agreement. The performance objective is based on our financial performance measures. Participants will be entitled to an award within a range of 50% at a minimum achievement level and 200% at a maximum achievement level.

PRSUs use a two -year performance measurement period and vest 50% on the second anniversary of the grant date (after the relevant performance has been measured) and the second 50% vest in February of the following year.

The weighted-average grant-date fair value of restricted stock units awarded totaled $80 million , $106 million and $72 million for the years ended December 31, 2016, 2015 and 2014 , respectively. The fair value of these awards was calculated using the value of Level 3 common stock on the grant date and these awards are being amortized over the periods in which the restrictions lapse. As of December 31, 2016 , unamortized compensation cost related to restricted stock units was $77 million and the weighted average period over which this cost will be recognized is 2.45 years.

The changes in restricted stock units are shown in the following table:

	Number	Weighted Average Grant Date Fair Value
Nonvested at January 1, 2014	2,924,350	$ 22.77
Stock and units granted	1,650,772	$ 43.48
Lapse of restrictions	(1,150,080)	$ 22.92
Stock and units forfeited	(206,305)	$ 27.14
Nonvested at December 31, 2014	3,218,737	$ 32.95
Stock and units granted	2,087,942	$ 50.60
Lapse of restrictions	(1,194,519)	$ 31.70
Stock and units forfeited	(358,227)	$ 44.25
Nonvested at December 31, 2015	3,753,933	$ 42.09
Stock and units granted	1,547,229	$ 51.45
Lapse of restrictions	(1,342,027)	$ 36.95
Stock and units forfeited	(254,712)	$ 47.45
Nonvested at December 31, 2016	3,704,423	$ 47.49

The changes in performance restricted stock units are shown in the following table:

	Number	Weighted Average Grant Date Fair Value
Nonvested at January 1, 2014	—	$ —
Units granted	605,111	$ 39.30
Lapse of restrictions	(1,750)	$ 39.14
Units forfeited	(35,480)	$ 39.14
Nonvested at December 31, 2014	567,881	$ 39.31
Units granted	713,657	$ 53.82
Lapse of restrictions	—	$ —
Units forfeited	(53,073)	$ 49.25
Nonvested at December 31, 2015	1,228,465	$ 47.31
Units granted	498,184	$ 52.84
Lapse of restrictions	(297,940)	$ 39.43
Units forfeited	(97,298)	$ 52.02
Nonvested at December 31, 2016	1,331,411	$ 50.80

The weighted-average grant-date fair value of performance restricted stock units awarded totaled $26 million , $38 million and $24 million for the years ended December 31, 2016, 2015 and 2014, respectively. The fair value of these awards was calculated using the value of Level 3 common stock on the grant date and these awards are being amortized over the periods in which the restrictions lapse. As of December 31, 2016, unamortized compensation cost related to PRSUs was $32 million and the weighted average period over which this cost will be recognized is 1.59 years.

The total fair value of restricted stock units and PRSUs whose restrictions lapsed in the years ended December 31, 2016, 2015 and 2014 was $61 million , $38 million and $27 million , respectively.

Defined Contribution Plans

We sponsor a number of defined contribution plans. The principal defined contribution plans are discussed individually below. Other defined contribution plans are not individually significant and therefore have been summarized in aggregate below.

We offer our qualified employees the opportunity to participate in a defined contribution retirement plan qualifying under the provisions of Section 401(k) of the Internal Revenue Code ("401(k) Plan"). Each employee is eligible to contribute, on a tax deferred basis, a portion of annual earnings generally not to exceed $18,000 in 2016 and $18,000 in 2015. We match 100% of employee contributions up to 4% of eligible earnings or applicable regulatory limits.

Our matching contributions are made with Level 3 common stock based on the closing stock price on each pay date. Our matching contributions are made through units in the Level 3 Stock Fund, which represent shares of Level 3 common stock. The Level 3 Stock Fund is the mechanism that is used for Level 3 to make employer matching and other contributions to employees through the Level 3 401(k) Plan. Prior to January 2016, employees were not able to purchase units in the Level 3 Stock Fund but effective January 2016, employees may allocate account balances to the Level 3 Stock Fund subject to a limitation on the total percentage of the employee's 401(K) account balances maintained in the Level 3

Stock Fund. Employees are able to diversify our matching contribution as soon as it is made, even if they are not fully vested, subject to insider trading rules and regulations. Our matching contributions vest ratably over the first three years of service or over such shorter period until the employee has completed three years of service at such time the employee is then 100% vested in all our matching contributions, including future contributions. We made 401(k) Plan matching contributions of $37 million , $36 million and $23 million for the years ended December 31, 2016, 2015 and 2014 , respectively. Our matching contributions are recorded as non-cash compensation and included in network related expenses of $5 million , $5 million and $4 million for the years ended December 31, 2016, 2015 and 2014 , respectively, and in selling, general and administrative expenses of $32 million , $31 million and $19 million for the years ended December 31, 2016, 2015 and 2014 , respectively. Former tw telecom employees became eligible to participate in our 401(k) Plan starting January 1, 2015.

The tw telecom 401(k) Plan ("tw telecom 401(k) Plan") provided 100% matching cash contributions up to a maximum 5% of eligible compensation. Our contributions to the tw telecom 401(k) Plan vest immediately. Expenses recorded relating to the tw telecom 401(k) Plan for the two months in 2014 subsequent to the completion of the tw telecom acquisition were approximately $2 million .

Other defined contribution plans we sponsored are individually not significant. On an aggregate basis the expenses we recorded relating to these plans were approximately $6 million , $6 million and $6 million for the years ended December 31, 2016, 2015 and 2014 , respectively.

Defined Benefit Plans

We have certain contributory and non-contributory employee pension plans, which are not significant to our financial position or operating results. We recognize in our balance sheet the funded status of our defined benefit post-retirement plans, which is measured as the difference between the fair value of the plan assets and the plan benefit obligations. We are also required to recognize changes in the funded status within accumulated other comprehensive income, net of tax to the extent such changes are not recognized in earnings as components of periodic net benefit cost. The fair value of the plan assets was $136 million and $142 million as of December 31, 2016 and 2015 , respectively. The total plan benefit obligations were $158 million and $158 million as of December 31, 2016 and 2015 , respectively. Therefore, the total funded status was an obligation of $22 million and $16 million as of December 31, 2016 and 2015 , respectively.

Annual Discretionary Bonus Grant

Our annual discretionary bonus program is intended to motivate employees to achieve our financial and business goals. Each participant is provided a target award expressed as a percentage of base salary. Actual awards under the program are based on corporate results as well as achievement of specific individual performance criteria during the bonus program period, and may be paid in cash, restricted stock units, or a combination of the two, at the sole discretion of the Compensation Committee of the Board of Directors. The annual discretionary bonus will be paid in cash for the 2016 bonus program, and was paid in cash for the 2015 and 2014 bonus programs. We paid out 1.4 million immediately-vested restricted stock units in 2014 for the 2013 bonus plan.

(13) Income Taxes

The following table summarizes the income tax (expense) benefit attributable to the income (loss) before income taxes for each of the three years ended December 31, 2016, 2015 and 2014 :

(dollars in millions)	2016	2015	2014
Current:			
United States Federal	$ —	$ —	$ —
State	(4)	(3)	(1)
Foreign	(41)	(33)	(40)
	(45)	(36)	(41)
Deferred, net of changes in valuation allowances:			
United States federal	(177)	2,941	6
State	(27)	246	15
Foreign	84	(1)	96
	(120)	3,186	117
Income Tax (Expense) Benefit	$ (165)	$ 3,150	$ 76

The United States and Foreign components of income (loss) before income taxes for each of the three years ended December 31, 2016, 2015 and 2014 are as follows (some of the income (loss) is subject to taxation in multiple jurisdictions):

(dollars in millions)	2016	2015	2014
United States	$ 794	$ 401	$ 207
Foreign	48	(118)	31
	$ 842	$ 283	$ 238

A reconciliation of the actual income tax (expense) benefit and the tax computed by applying the U.S. federal rate (35%) to the income before income taxes for each of the three years ended December 31, 2016, 2015 and 2014 is shown in the following table:

	2016	2015	2014
	(dollars in millions)		
Computed Tax Expense at Statutory Rate	$ (295)	$ (99)	$ (83)
State and Local Income Taxes	(31)	(15)	(8)
Effect of Earnings in Jurisdictions outside of the United States	24	30	13
Change in Valuation Allowance	139	3,401	205
Disallowed Interest	(58)	(62)	(25)
Non-Deductible Deconsolidation Loss	—	(57)	—
Other Permanent Items	(33)	(25)	(19)
Adoption of ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting*	22	—	—
U.S. Federal Law Changes	110	—	—
Indefinite-Lived Assets	—	—	2
Uncertain Tax Positions	(2)	(5)	3
Changes in Tax Rates	(24)	(20)	(7)
Other, net	(17)	2	(5)
Income Tax (Expense) Benefit	$ (165)	$ 3,150	$ 76

The components of the net deferred tax assets as of December 31, 2016 and 2015 are as follows:

	2016	2015
	(dollars in millions)	
Deferred Tax Assets:		
Deferred revenue	364	351
Unutilized tax net operating loss carry forwards	4,550	4,959
Fixed assets	95	115
Other	471	501
Total Deferred Tax Assets	5,480	5,926
Deferred Tax Liabilities:		
Deferred revenue	(57)	(58)
Fixed assets	(962)	(924)
Intangible assets	(357)	(399)
Other	(120)	(350)
Total Deferred Tax Liabilities	(1,496)	(1,731)
Net Deferred Tax Assets before Valuation Allowance	3,984	4,195
Valuation Allowance	(862)	(1,002)
Net Deferred Tax Assets after Valuation Allowance	$ 3,122	$ 3,193

As of December 31, 2016 , we had available net operating loss carry forwards of approximately $9.0 billion after taking into account the effects of Section 382 limitation of the Internal Revenue Code for U.S. federal income tax purposes.

As a result of certain realization requirements of applicable accounting guidance, the table of deferred tax asset and liabilities shown above does not include certain deferred tax assets as of December 31, 2015 that arose directly from tax deductions related to equity compensation in excess of compensation recognized for financial reporting. However, effective January 1, 2016 we adopted ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting* , and the deferred tax assets related to equity compensation are reflected in the table for the year ended December 31, 2016.

Our loss carry forwards expire in future years through 2035 and are subject to examination by the tax authorities up to three years after the carry forwards are utilized. The U.S. net operating tax loss carry forwards available for federal income tax purposes expire as follows (dollars in millions):

Expiring December 31,	Amount
2024	$ 891
2025	1,267
2026	1,254
2027	1,645
2028	477
2029	694
2030	663
2031	833
2032	729
2033	194
2034	389
2035	1
	$ 9,037

Under the rules prescribed by Internal Revenue Code Section 382 and applicable regulations, if certain transactions occur with respect to an entity's capital stock that result in a cumulative ownership shift of more than 50 percentage points by 5% stockholders over a three-year testing period, annual limitations are imposed with respect to the entity's ability to utilize its net operating loss carry forwards and certain current deductions against any taxable income the entity achieves in future periods and could result in a substantial income tax expense at the time of the shift. We extended the term of our Stockholder Rights Plan, which was adopted to protect our U.S. federal net operating loss carry forwards from these limitations. This plan was designed to deter trading that would result in a change of control (as defined in Section 382) and therefore protect our ability to use our U.S. federal net operating loss carry forwards in the future.

As of December 31, 2016 , we had state net operating loss carry forwards of approximately $9.4 billion that have various expiration periods through 2035 . We had approximately $5.5 billion of foreign jurisdiction net operating loss carry forwards that are subject to limitations on their utilization. The majority of these foreign jurisdiction tax loss carry forwards have no expiration period.

We recognize deferred tax assets and liabilities for our domestic and non-U.S. operations, for operating loss and other credit carry forwards and the expected tax consequences of temporary differences between the tax basis of assets and liabilities and their reported amounts using enacted tax rates in effect for the year the differences are expected to reverse. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The valuation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in our financial statements or tax returns, and future profitability by tax jurisdiction. We have historically provided a valuation allowance to reduce our U.S. federal and state and foreign deferred tax assets to the amount that is more likely than not to be realized. We monitor our cumulative loss position and other evidence each quarter to determine the appropriateness of our valuation allowance. Although we believe our estimates are reasonable, the ultimate determination of the appropriate amount of valuation allowance involves significant judgment.

In the fourth quarter of 2014, we released $100 million of deferred tax valuation allowance primarily related to our business in the U.K. due to a recapitalization and consolidation of legal entities whereby one U.K. entity with a full valuation allowance was merged with an entity that had no valuation allowance against its deferred tax assets, as we had an expectation of future taxable income for the combined entities.

In the fourth quarter of 2015, we released the majority of the valuation allowance against our U.S. federal and state deferred tax assets, resulting in a non-cash benefit to income tax expense of approximately $3.3 billion , $3.1 billion of which was related to future years' earnings. In making the determination to release the valuation allowance against U.S. federal and state deferred tax assets, we took into consideration our movement into a cumulative income position for the most recent 3-year period, including pro forma adjustments for acquired entities, our 8 out of 9 consecutive quarters of pre-tax operating income, and forecasts of future earnings for our U.S. business. We expect to continue to generate income before taxes in the United States in future periods.

During 2016, we recognized a $22 million income tax benefit from the vesting of stock based compensation due to the adoption of ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting* . We also recognized $82 million of income tax benefit related to the release of deferred tax asset valuation allowances primarily in Germany, Brazil, and Mexico. The determinations to release the foreign valuation allowances were driven by our projection of future profitability for each legal entity due to the recapitalization of our German subsidiary, the planned action to restructure our Brazilian business, and the merger of our Mexican subsidiaries.

We continue to maintain our existing valuation allowance against net deferred tax assets in many of our state and foreign jurisdictions where we do not currently believe the realization of our deferred tax assets is more likely than not.

The valuation allowance for deferred tax assets was approximately $0.9 billion as of December 31, 2016 and $1.0 billion as of December 31, 2015 . The change in valuation allowance is primarily due to the release of the valuation allowance against foreign deferred tax assets.

With respect to our foreign corporate subsidiaries, we provide for U.S. income taxes on the undistributed earnings and the other outside basis temporary differences (differences between a parent's book and tax basis in a subsidiary, including currency translation adjustments) unless they are considered indefinitely reinvested outside the United States. The amount of temporary differences related to undistributed earnings and other outside basis temporary differences of investments in foreign subsidiaries upon which U.S. income taxes have not been provided was immaterial.

With respect to our foreign branches, we had historically established deferred tax liabilities for foreign branches with an overall cumulative translation gain, but had not established deferred tax assets for those with an overall translation loss as we had no plans to trigger realization of the losses in the foreseeable future. On December 7, 2016, the Internal Revenue Service issued regulations under Internal

Revenue Code Section 987 addressing the taxation of foreign currency translations gains and losses arising from foreign branches. The new regulations require a "fresh start" recalculation of the unrealized gains and losses as of the adoption date. The regulations provide that the tax bases of specified assets, such as fixed assets, will be translated at historic foreign exchange rates. As a result, the deferred taxes related to such foreign currency translation are expected to reverse through the operations of the branch thereby allowing the recognition of deferred tax assets arising from translation losses as well. The issuance of the regulations resulted in us recognizing an estimated one-time tax benefit of $110 million during the fourth quarter 2016.

Our liability for uncertain income tax positions totaled $18 million at December 31, 2016 and $18 million at December 31, 2015 . If the remaining balance of unrecognized tax benefits were realized in a future period, it would result in a tax benefit of $17 million ($17 million as of December 31, 2015) and a reduction in the effective tax rate. We do not expect that the liability for uncertain tax positions will materially increase or decrease during the twelve months ended December 31, 2017 . A reconciliation of the beginning and ending balance of unrecognized income tax benefits follows (dollars in millions):

	Amount
Balance as of January 1, 2014	$ 13
Tax positions of prior years netted against deferred tax assets	5
Gross increases - tax positions of prior years	1
Gross increases - tax positions during 2014	—
Gross decreases - lapse of statute of limitations	(2)
Gross decreases - settlement with taxing authorities	—
Balance as of December 31, 2014	17
Tax positions of prior years netted against deferred tax assets	(2)
Gross increases - tax positions of prior years	3
Gross increases - tax positions during 2015	2
Gross decreases - lapse of statute of limitations	(2)
Gross decreases - settlement with taxing authorities	—
Balance as of December 31, 2015	18
Tax positions of prior years netted against deferred tax assets	(1)
Gross increases - tax positions during 2016	2
Gross decreases - tax positions of prior years	(1)
Gross decreases - lapse of statute of limitations	—
Gross decreases - settlement with taxing authorities	—
Balance as of December 31, 2016	$ 18

The unrecognized tax benefits in the table above do not include accrued interest and penalties of $18 million , $16 million and $17 million as of December 31, 2016, 2015 and 2014 , respectively. Our policy is to record interest and penalties related to uncertain tax positions in income tax expense. We recognized accrued interest and penalties related to uncertain tax positions in income tax expense in our Consolidated Statements of Income of approximately $1 million , a benefit of less than $1 million and a benefit of approximately $1 million for the years ended December 31, 2016, 2015 and 2014 , respectively.

We, or at least one of our subsidiaries, file income tax returns in the U.S. federal jurisdiction and various states and foreign jurisdictions. With few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2003. The Internal Revenue Service and state and local taxing authorities reserve the right to audit any period where net operating loss carry forwards are available.

We incur tax expense attributable to income in various subsidiaries that are required to file state or foreign income tax returns on a separate legal entity basis. We also recognize accrued interest and penalties in income tax expense related to uncertain tax benefits. Our tax rate is volatile and may move up or down with changes in, among other things, the amount and source of income or loss, our ability to utilize foreign tax credits, changes in tax laws, and the movement of liabilities established for uncertain tax positions as statutes of limitations expire or positions are otherwise effectively settled.

(14) Segment Information

Operating segments are defined under GAAP as components of an enterprise for which separate financial information is available and evaluated regularly by our chief operating decision maker ("CODM") in deciding how to allocate resources and assess performance. Our CODM is Jeff K. Storey, President and Chief Executive Officer. Our reportable segments consist of: 1) North America; 2) EMEA; and 3) Latin America. Other separate business interests that are not segments include interest, certain corporate assets and overhead costs, and certain other general and administrative costs that are not allocated to any of the operating segments.

The CODM measures and evaluates segment performance primarily based upon revenue, revenue growth and Adjusted EBITDA. Adjusted EBITDA, as defined by us, is equal to net income (loss) from the Consolidated Statements of Income before (1) income tax benefit (expense), (2) total other income (expense), (3) non-cash impairment charges included within selling, general and administrative expenses and network related expenses, (4) depreciation and amortization expense, and (5) non-cash stock-based compensation expense included within selling, general and administrative expenses and network related expenses.

Adjusted EBITDA is not a measurement under GAAP and may not be used in the same way by other companies. Management believes that Adjusted EBITDA is an important part of our internal reporting and is a key measure used by management to evaluate our profitability and operating performance and to make resource allocation decisions. Management believes such measurement is especially important in a capital-intensive industry such as telecommunications. Management also uses Adjusted EBITDA to compare our performance to that of our competitors and to eliminate certain non-cash and non-operating items in order to consistently measure from period to period our ability to fund capital expenditures, fund growth, service debt and determine bonuses.

Adjusted EBITDA excludes non-cash impairment charges and non-cash stock-based compensation expense because of the non-cash nature of these items. Adjusted EBITDA also excludes interest income, interest expense and income tax benefit (expense) because these items are associated with our capitalization and tax structures. Adjusted EBITDA also excludes depreciation and amortization expense because these non-cash expenses reflect the effect of capital investments which management believes are better evaluated through cash flow measures. Adjusted EBITDA excludes net other income (expense) because these items are not related to our primary operations.

There are limitations to using non-GAAP financial measures such as Adjusted EBITDA, including the difficulty associated with comparing companies that use similar performance measures whose calculations may differ from our calculations. Additionally, this financial measure does not include certain significant items such as interest income, interest expense, income tax benefit (expense), depreciation and amortization expense, non-cash impairment charges, non-cash stock-based compensation expense, and net other income (expense). Adjusted EBITDA should not be considered a substitute for other measures of financial performance reported in accordance with GAAP.

Revenue and the related expenses are attributed to regions based on where services are provided. Revenue and costs for services provided in more than one region are allocated equally between the regions, and we do not otherwise charge for services between reportable segments. Therefore, segment results do not include any intercompany revenue. The operating activities of the separate regions along with the activities that are not attributable to a segment are interdependent, and the regional results in the tables below do not include all intercompany charges and allocations that would be necessary to report the regional results on a standalone basis.

Total revenue consists of:

- Core Network Services revenue from Internet Protocol and data services; transport and fiber; local and enterprise voice services; colocation and data center services; and security services.

- Wholesale Voice Services revenue from sales to other carriers of long distance voice services.

Core Network Services revenue represents higher profit services and Wholesale Voice Services revenue represents lower profit services. Core Network Services revenue requires different levels of investment and focus and provides different contributions to our operating results than Wholesale Voice Services revenue. Management believes that growth in revenue from our Core Network Services is critical to the long-term success of our business. We also believe we must continue to effectively manage the profitability of the Wholesale Voice Services revenue. We believe trends in our communications business are best gauged by analyzing revenue changes in Core Network Services.

The following table presents revenue by segment for each of the years ended December 31,

(dollars in millions)	**2016**	**2015**	**2014**
Core Network Services Revenue:			
North America	$ 6,362	$ 6,207	$ 4,520
EMEA	744	835	904
Latin America	661	715	784
Total Core Network Services Revenue	$ 7,767	$ 7,757	$ 6,208
Wholesale Voice Services Revenue:			
North America	$ 386	$ 447	$ 535
EMEA	11	14	6
Latin America	8	11	28
Total Wholesale Voice Services Revenue	$ 405	$ 472	$ 569
Total Revenue	$ 8,172	$ 8,229	$ 6,777

The following table presents Adjusted EBITDA by segment and reconciles Adjusted EBITDA to net income for each of the years ended December 31,

(dollars in millions)	2016	2015	2014
Adjusted EBITDA:			
North America	$ 3,220	$ 3,048	$ 2,065
EMEA	215	235	214
Latin America	293	302	348
Unallocated Corporate Expenses	(878)	(947)	(732)
Adjusted EBITDA	$ 2,850	$ 2,638	$ 1,895
Income Tax (Expense) Benefit	(165)	3,150	76
Total Other Expense	(602)	(1,048)	(775)
Depreciation and Amortization	(1,250)	(1,166)	(808)
Non-Cash Stock Compensation	(156)	(141)	(73)
Non-Cash Impairment	—	—	(1)
Net Income	$ 677	$ 3,433	$ 314

The following table presents capital expenditures by segment and reconciles capital expenditures to total capital expenditures for each of the years ended December 31:

(dollars in millions)	2016	2015	2014
Capital Expenditures:			
North America	$ 874	$ 752	$ 495
EMEA	145	158	117
Latin America	166	155	153
Unallocated Corporate Capital Expenditures	149	164	145
Total Capital Expenditures	$ 1,334	$ 1,229	$ 910

The following table presents total assets by segment:

	As of December 31,	
(dollars in millions)	2016	2015
Assets:		
North America	$ 20,818	$ 19,961
EMEA	1,639	1,796
Latin America	2,304	2,131
Other	127	129
Total Assets	$ 24,888	$ 24,017

The changes in the carrying amount of goodwill by segment during year ended December 31, 2016 and 2015 were as follows (in millions):

	North America	EMEA	Latin America	Total
Balance at January 1, 2015	$ 6,955	$ 138	$ 596	$ 7,689
Goodwill adjustments including the effect of foreign currency rate change	69	(9)	—	60
Balance at December 31, 2015	7,024	129	596	7,749
Effect of foreign currency rate change	—	(20)	—	(20)
Balance at December 31, 2016	$ 7,024	$ 109	$ 596	$ 7,729

(15) Commitments, Contingencies and Other Items

We are subject to various legal proceedings and other contingent liabilities that individually or in the aggregate could materially affect our financial condition, future results of operations or cash flows. Amounts accrued for such contingencies aggregate to $97 million and are included in “Other” current liabilities and “Other Liabilities” in our Consolidated Balance Sheet at December 31, 2016. The establishment of an accrual does not mean that actual funds have been set aside to satisfy a given contingency. Thus, the resolution of a particular contingency for the amount accrued would have no effect on our results of operations but could materially adversely affect our cash flows for the affected period.

We review our accruals at least quarterly and adjusts them to reflect the impact of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular matter. Below is a description of material legal proceedings and other contingencies pending at December 31, 2016. Although we believe we have accrued for these matters in accordance with the accounting guidance for contingencies, contingencies are inherently unpredictable and it is possible that results of operations or cash flows could be materially and adversely affected in any particular period by unfavorable developments in, or resolution or disposition of, one or more of these matters. For those contingencies in respect of which we believe it is reasonably possible that a loss may result that is materially in excess of the accrual (if any) established for the matter, we have either provided an estimate of such possible loss or range of loss or included a statement that such an estimate cannot be made. In addition to the contingencies described below, we are party to many other legal proceedings and contingencies, the resolution of which is not expected to materially affect our financial condition or future results of operations beyond the amounts accrued.

Rights-of-Way Litigation

We are party to a number of purported class action lawsuits involving our right to install fiber optic cable network in railroad right-of-ways adjacent to plaintiffs' land. In general, we obtained the rights to construct our networks from railroads, utilities, and others, and have installed our networks along the rights-of-way so granted. Plaintiffs in the purported class actions assert that they are the owners of lands over which the fiber optic cable networks pass, and that the railroads, utilities and others who granted us the right to construct and maintain our network did not have the legal authority to do so. The complaints seek damages on theories of trespass, unjust enrichment and slander of title and property, as well as punitive damages. We have also received, and may in the future receive, claims and demands related to rights-of-way issues similar to the issues in these cases that may be based on similar or different legal theories. We have defeated motions for class certification in a number of these actions but expect that, absent settlement of these actions, plaintiffs in the pending lawsuits will continue to seek certification of statewide or multi-state classes. The only lawsuit in which a class was certified against us, absent an agreed upon settlement, occurred in *Koyle, et. al. v. Level 3 Communications, Inc., et. al.,* a purported two state class action filed in the United States District Court for the District of Idaho. The *Koyle* lawsuit has been dismissed pursuant to a settlement reached in November 2010 as described further below.

We negotiated a series of class settlements affecting all persons who own or owned land next to or near railroad rights of way in which we have installed our fiber optic cable networks. The United States District Court for the District of Massachusetts in *Kingsborough v. Sprint Communications Co. L.P.* granted preliminary approval of the proposed settlement; however, on September 10, 2009, the court denied a motion for final approval of the settlement on the basis that the court lacked subject matter jurisdiction and dismissed the case.

In November 2010, we negotiated revised settlement terms for a series of state class settlements affecting all persons who own or owned land next to or near railroad rights of way in which we have installed our fiber optic cable networks. We are currently pursuing presentment of the settlement in applicable jurisdictions. The settlements, affecting current and former landowners, have received final federal court approval in all but one of the applicable states and the parties are actively engaged in, or have completed, the claims process for the vast majority of the applicable states, including payment of claims. We continue to seek approval in the remaining state.

Management believes that we have substantial defenses to the claims asserted in all of these actions and intends to defend them vigorously if a satisfactory settlement is not ultimately approved for all affected landowners.

Peruvian Tax Litigation

Beginning in 2005, one of our Peruvian subsidiaries received a number of assessments for tax, penalties and interest for calendar years 2001 and 2002. Peruvian tax authorities ("SUNAT") took the position that the Peruvian subsidiary incorrectly documented its importations resulting in additional income tax withholding and value-added taxes ("VAT"). The total amount of the asserted claims, including potential interest and penalties, was $26 million , consisting of $3 million for income tax withholding in connection with the import of services for calendar years 2001 and 2002, $7 million for VAT in connection with the import of services for calendar years 2001 and 2002, and $16 million in connection with the disallowance of VAT credits for periods beginning in 2005. After taking into account the developments described below, as well as the accrued interest and foreign exchange effects, the total amount of exposure is $18 million at December 31, 2016.

We challenged the tax assessments during 2005 by filing administrative claims before SUNAT. During August 2006 and June 2007, SUNAT rejected our administrative claims, thereby confirming the assessments. Appeals were filed in September 2006 and July 2007 with the Tribunal Fiscal, the highest level of administrative review, which is not part of the Peru judiciary (the "Tribunal"). The 2001 and 2002 assessed withholding tax assessments were resolved in our favor in separate administrative resolutions; however, the penalties with respect to withholding tax remain at issue in the administrative appeals.

In October 2011, the Tribunal issued its administrative resolution with respect to the calendar year 2002 tax period regarding VAT, associated penalties and penalties associated with withholding taxes, deciding the central issue underlying the assessments in the government's favor, while confirming the assessment in part and denying a portion of the assessment on procedural grounds. We appealed the Tribunal's October 2011 administrative resolutions to the judicial court in Peru. In September 2014, the first judicial court rendered a decision largely in our favor on the central issue underlying the assessments. SUNAT appealed the court’s decision to the next judicial level. The court of appeal remanded the case to the first judicial court for further development of the facts and legal analysis supporting its decision. In April 2016, the first judicial level rendered a decision in our favor on the central issue underlying the assessments. SUNAT has appealed the substantive issue to the next judicial level. We also appealed certain procedural points.

In October 2013, the Tribunal notified us of its July 2013 administrative resolution with respect to the calendar year 2001 tax period regarding VAT, associated penalties and penalties associated with withholding taxes, determining the central issue underlying the assessments in the government's favor, while confirming the assessment in part and denying a portion of the assessment on procedural grounds. We appealed the Tribunal's July 2013 administrative resolutions to the judicial court in Peru. In April 2015, the first judicial court rendered a decision largely in SUNAT's favor on the central issue underlying the assessments. We appealed the court's decision to the next judicial level. In April 2016, the court of appeal rendered a decision that declared null the April 2015 decision and remanded the case to the first judicial court for further development of the facts and legal analysis supporting its decision.

In December 2013, SUNAT initiated an audit of calendar year 2001. In June 2014, we were served with SUNAT's assessments of the 2001 VAT credits declared null by the Tribunal and the corresponding fine. In July 2014, we challenged these assessments by filing administrative claims before SUNAT. In January 2015, SUNAT rejected the administrative claims, thereby confirming the assessments. We filed an appeal with the Tribunal in February 2015. In May 2015, the Tribunal notified us of its administrative resolution declaring the assessments and corresponding fines null. The time for SUNAT to appeal this resolution has closed. Under local practice, notification of an appeal can take several months. Counsel confirmed in the first quarter of 2016 that SUNAT has not filed an appeal to the resolution. Nevertheless, SUNAT retains the right to reissue the assessments declared null or start a new audit. However, we are under no obligation to provide additional information and any fine issued by SUNAT based on the same information that it has already used in the past would be declared null. Accordingly, in March 2016, we released an accrual of approximately $15 million for an assessment and associated interest.

In addition, based on a change in legal interpretation by the Peruvian judicial courts, the statute of limitations with respect to the 2001 fines has expired. Accordingly, in the fourth quarter of 2016, we released an accrual of approximately $11 million of fines and associated interest.

Employee Severance and Contractor Termination Disputes

A number of former employees and third-party contractors have asserted a variety of claims in litigation against certain of our Latin American subsidiaries for separation pay, severance, commissions, pension benefits, unpaid vacation pay, breach of employment contracts, unpaid performance bonuses, property damages, moral damages and related statutory penalties, fines, costs and expenses (including accrued interest, attorneys fees and statutorily mandated inflation adjustments) as a result of their separation from us or termination of service relationships. We are vigorously defending ourselves against the asserted claims, which aggregate to approximately $29 million at December 31, 2016.

Brazilian Tax Claims

In December 2004, March 2009, April 2009 and July 2014, the São Paulo state tax authorities issued tax assessments against one of our Brazilian subsidiaries for the Tax on Distribution of Goods and Services ("ICMS") with respect to revenue from leasing movable properties (in the case of the December 2004, March 2009 and July 2014 assessments) and revenue from the provision of Internet access services (in the case of the April 2009 and July 2014 assessments), by treating such activities as the provision of communications services, to which the ICMS tax applies. During the third quarter of 2014, we released an accrual of $6 million for tax, penalty and associated interest corresponding to the ICMS applicable on the provision of Internet access services due to the expiration of the statute of limitations for the January 2008 to June 2009 tax periods. In September 2002, July 2009 and May 2012, the Rio de Janeiro state tax authorities issued tax assessments to the same Brazilian subsidiary on similar issues. We have filed objections to these assessments, arguing that the lease of assets and the provision of Internet access are not communication services subject to ICMS. The objections to the September 2002, December 2004 and March 2009 assessments were rejected by the respective state administrative courts, and we have appealed those decisions to the judicial courts. In October 2012 and June 2014, we received favorable rulings from the lower court on the December 2004 and March 2009 assessments regarding equipment leasing, but those rulings are subject to appeal by the state. No ruling has been obtained with respect to the September 2002 assessment. The objections to the April and July 2009 and May 2012 assessments are still pending final administrative decisions. The July 2014 assessment was confirmed during the fourth quarter of 2014 at the first administrative level and we appealed this decision to the second administrative level. During the fourth quarter of 2014, we entered into an amnesty with the Rio de Janeiro state tax authorities with respect to potential ICMS liability for the 2008 tax period. As a result, we paid $5 million and released an accrual of $3 million of tax corresponding to the ICMS applicable on the provision of Internet access services in the fourth quarter of 2014.

We are vigorously contesting all such assessments in both states and, in particular, view the assessment of ICMS on revenue from leasing movable properties to be without merit. Nevertheless, we believe it is reasonably possible that these assessments could result in a loss of up to $48 million at December 31, 2016 in excess of the accruals established for these matters.

Letters of Credit

It is customary for us to use various financial instruments in the normal course of business. These instruments include letters of credit. Letters of credit are conditional commitments issued on our behalf in accordance with specified terms and conditions. As of December 31, 2016 and December 31, 2015 , we had outstanding letters of credit or other similar obligations of approximately $39 million and $46 million , respectively, of which $33 million and $43 million are collateralized by cash that is reflected on the Consolidated Balance Sheets as restricted cash and securities. We do not believe exposure to loss related to our letters of credit is material.

Operating Leases

We are leasing rights-of-way, facilities and other assets under various operating leases which, in addition to rental payments, may require payments for insurance, maintenance, property taxes and other executory costs related to the lease. Certain leases provide for adjustments in lease cost based upon adjustments in various price indexes and increases in the landlord's management costs.

The right-of-way agreements have various expiration dates through 2060 . Payments under these right-of-way agreements were $205 million in 2016 , $211 million in 2015 and $173 million in 2014 .

We have obligations under non-cancelable operating leases for certain colocation, office facilities and other assets, including lease obligations for which facility related restructuring charges have been recorded. The lease agreements have various expiration dates through 2119 . Rent expense, including common area maintenance, under non-cancelable lease agreements was $347 million in 2016 , $357 million in 2015 and $318 million in 2014 .

Future minimum payments for the next five years and thereafter under network and related right-of-way agreements and non-cancelable operating leases for facilities and other assets consist of the following as of December 31, 2016 (dollars in millions):

	Right-of-Way Agreements	Operating Leases	Total	Future Minimum Sublease Receipts
2017	$ 162	$ 282	$ 444	$ 4
2018	80	244	324	4
2019	71	222	293	3
2020	55	164	219	1
2021	50	124	174	—
Thereafter	325	501	826	—
	$ 743	$ 1,537	$ 2,280	$ 12

Certain right-of-way agreements include provisions for increases in payments in future periods based on the rate of inflation as measured by various price indexes. We have not included estimates for these increases in future periods in the amounts included above.

Certain non-cancelable right of way agreements provide for automatic renewal on a periodic basis. We include payments due during these automatic renewal periods given the significant cost to relocate our network and other facilities.

Certain other right-of-way agreements are currently cancelable or can be terminated under certain conditions by us. We include the payments under such cancelable right-of-way agreements in the table above for a period of 1 year from January 1, 2017 , if we do not consider it likely that we will cancel the right of way agreement within the next year.

Cost of Access and Third-Party Maintenance

In addition, we have purchase commitments with third-party access vendors that require us to make payments to purchase network services, capacity and telecommunications equipment. Some of these access vendor commitments require us to maintain minimum monthly and/or annual billings, in certain cases based on usage. In addition, we have purchase commitments with third parties that require us to make payments for maintenance services for certain portions of our network.

The following table summarizes our purchase commitments at December 31, 2016 (dollars in millions):

	Total	Less than 1 Year	2 - 3 Years	4 - 5 Years	After 5 Years
Cost of Access Services	$ 425	$ 278	$ 131	$ 11	$ 5
Third-Party Maintenance Services	235	59	69	40	67
	$ 660	$ 337	$ 200	$ 51	$ 72

(16) Condensed Consolidating Financial Information

Level 3 Financing has issued Senior Notes that are unsecured obligations of Level 3 Financing, Inc.; however, they are also fully and unconditionally and jointly and severally guaranteed on an unsecured senior basis by Level 3 Communications, Inc. and Level 3 Communications, LLC.

In conjunction with the registration of the Level 3 Financing, Inc. Senior Notes, the accompanying condensed consolidating financial information has been prepared and presented pursuant to SEC Regulation S-X Rule 3-10 "Financial statements of guarantors and affiliates whose securities collateralize an issue registered or being registered."

The operating activities of the separate legal entities included in our Consolidated Financial Statements are interdependent. The accompanying condensed consolidating financial information presents the statements of comprehensive income, balance sheets and statements of cash flows of each legal entity and, on an aggregate basis, the other non-guarantor subsidiaries based on amounts incurred by such entities, and is not intended to present the operating results of those legal entities on a stand-alone basis. Level 3 Communications, LLC leases equipment and certain facilities from other wholly owned subsidiaries of Level 3 Communications, Inc. These transactions are eliminated in our consolidated results.

Table of Contents

Condensed Consolidating Statements of Comprehensive Income (Loss)
For the year ended December 31, 2016

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Revenue	$ —	$ —	$ 3,557	$ 4,747	$ (132)	$ 8,172
Costs and Expenses:						
Network access costs	—	—	1,283	1,574	(132)	2,725
Network related expenses	—	—	953	393	—	1,346
Depreciation and amortization	—	—	385	865	—	1,250
Selling, general and administrative expenses	16	5	1,024	362	—	1,407
Total costs and expenses	16	5	3,645	3,194	(132)	6,728
Operating (Loss) Income	(16)	(5)	(88)	1,553	—	1,444
Other Income (Expense):						
Interest income	—	—	3	1	—	4
Interest expense	(36)	(505)	(2)	(3)	—	(546)
Interest income (expense) affiliates, net	1,385	2,113	(3,215)	(283)	—	—
Equity in net earnings (losses) of subsidiaries	(669)	(2,033)	757	—	1,945	—
Other, net	(1)	(39)	2	(22)	—	(60)
Total other expense	679	(464)	(2,455)	(307)	1,945	(602)
Income (Loss) before Income Taxes	663	(469)	(2,543)	1,246	1,945	842
Income Tax (Expense) Benefit	14	(200)	(2)	23	—	(165)
Net Income (Loss)	677	(669)	(2,545)	1,269	1,945	677
Other Comprehensive Loss, Net of Income Taxes	(86)	—	—	(86)	86	(86)
Comprehensive Income (Loss)	$ 591	$ (669)	$ (2,545)	$ 1,183	$ 2,031	$ 591

Condensed Consolidating Statements of Comprehensive Income (Loss)
For the year ended December 31, 2015

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Revenue	$ —	$ —	$ 3,325	$ 5,077	$ (173)	$ 8,229
Costs and Expenses:						
Network access costs	—	—	1,243	1,763	(173)	2,833
Network related expenses	—	—	947	485	—	1,432
Depreciation and amortization	—	—	309	857	—	1,166
Selling, general and administrative expenses	4	—	1,064	399	—	1,467
Total costs and expenses	4	—	3,563	3,504	(173)	6,898
Operating (Loss) Income	(4)	—	(238)	1,573	—	1,331
Other Income (Expense):						
Interest income	—	—	—	1	—	1
Interest expense	(51)	(574)	(3)	(14)	—	(642)
Interest income (expense) affiliates, net	1,310	1,984	(3,041)	(253)	—	—
Equity in net earnings (losses) of subsidiaries	2,162	(1,693)	177	—	(646)	—
Other, net	(18)	(200)	3	(192)	—	(407)
Total other expense	3,403	(483)	(2,864)	(458)	(646)	(1,048)
Income (Loss) before Income Taxes	3,399	(483)	(3,102)	1,115	(646)	283
Income Tax (Expense) Benefit	34	2,645	(1)	472	—	3,150
Net Income (Loss)	3,433	2,162	(3,103)	1,587	(646)	3,433
Other Comprehensive (Loss) Income, Net of Income Taxes	(154)	—	—	(154)	154	(154)
Comprehensive Income (Loss)	$ 3,279	$ 2,162	$ (3,103)	$ 1,433	$ (492)	$ 3,279

Condensed Consolidating Statements of Comprehensive Income (Loss)
For the year ended December 31, 2014

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Revenue	$ —	$ —	$ 3,073	$ 3,918	$ (214)	$ 6,777
Costs and Expenses:						
Network access costs	—	—	1,177	1,566	(214)	2,529
Network related expenses	—	—	762	484	—	1,246
Depreciation and amortization	—	—	277	531	—	808
Selling, general and administrative expenses	21	2	735	423	—	1,181
Total costs and expenses	21	2	2,951	3,004	(214)	5,764
Operating (Loss) Income	(21)	(2)	122	914	—	1,013
Other Income (Expense):						
Interest income	—	—	—	1	—	1
Interest expense	(143)	(492)	(2)	(17)	—	(654)
Interest income (expense) affiliates, net	1,227	1,827	(2,890)	(164)	—	—
Equity in net earnings (losses) of subsidiaries	(710)	(2,047)	663	—	2,094	—
Other, net	(53)	—	7	(76)	—	(122)
Total other expense	321	(712)	(2,222)	(256)	2,094	(775)
Income (Loss) before Income Taxes	300	(714)	(2,100)	658	2,094	238
Income Tax (Expense) Benefit	14	4	(1)	59	—	76
Net Income (Loss)	314	(710)	(2,101)	717	2,094	314
Other Comprehensive Income (Loss), Net of Income Taxes	(183)	—	—	(183)	183	(183)
Comprehensive Income (Loss)	$ 131	$ (710)	$ (2,101)	$ 534	$ 2,277	$ 131

Condensed Consolidating Balance Sheets
December 31, 2016

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Assets						
Current Assets:						
Cash and cash equivalents	$ 15	$ —	$ 1,700	$ 104	$ —	$ 1,819
Restricted cash and securities	—	—	1	6	—	7
Receivables, less allowances for doubtful accounts	—	—	26	686	—	712
Due from affiliates	17,032	21,715	—	2,180	(40,927)	—
Other	—	—	87	28	—	115
Total Current Assets	17,047	21,715	1,814	3,004	(40,927)	2,653
Property, Plant, and Equipment, net	—	—	3,869	6,270	—	10,139
Restricted Cash and Securities	22	—	9	—	—	31
Goodwill and Other Intangibles, net	—	—	353	8,291	—	8,644
Investment in Subsidiaries	16,869	17,599	3,674	—	(38,142)	—
Deferred Tax Assets	51	2,687	—	632	—	3,370
Other Assets, net	—	—	16	35	—	51
Total Assets	$ 33,989	$ 42,001	$ 9,735	$ 18,232	$ (79,069)	$ 24,888
Liabilities and Stockholders' Equity (Deficit)						
Current Liabilities:						
Accounts payable	$ —	$ —	$ 307	$ 399	$ —	$ 706
Current portion of long-term debt	—	—	2	5	—	7
Accrued payroll and employee benefits	—	—	160	35	—	195
Accrued interest	11	110	—	8	—	129
Current portion of deferred revenue	—	—	116	150	—	266
Due to affiliates	—	—	40,927	—	(40,927)	—
Other	—	—	127	41	—	168
Total Current Liabilities	11	110	41,639	638	(40,927)	1,471
Long-Term Debt, less current portion	592	10,108	13	164	—	10,877
Deferred Revenue, less current portion	—	—	719	282	—	1,001
Other Liabilities	16	—	155	451	—	622
Commitments and Contingencies						
Stockholders' Equity (Deficit)	33,370	31,783	(32,791)	16,697	(38,142)	10,917
Total Liabilities and Stockholders' Equity (Deficit)	$ 33,989	$ 42,001	$ 9,735	$ 18,232	$ (79,069)	$ 24,888

Condensed Consolidating Balance Sheets
December 31, 2015

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Assets						
Current Assets:						
Cash and cash equivalents	$ 12	$ 6	$ 727	$ 109	$ —	$ 854
Restricted cash and securities	—	—	1	7	—	8
Receivables, less allowances for doubtful accounts	—	—	47	710	—	757
Due from affiliates	12,415	22,759	—	2,816	(37,990)	—
Other	—	—	56	55	—	111
Total Current Assets	12,427	22,765	831	3,697	(37,990)	1,730
Property, Plant, and Equipment, net	—	—	3,423	6,455	—	9,878
Restricted Cash and Securities	27	—	14	1	—	42
Goodwill and Other Intangibles, net	—	—	363	8,513	—	8,876
Investment in Subsidiaries	16,772	17,714	3,734	—	(38,220)	—
Deferred Tax Assets	38	2,847	—	556	—	3,441
Other Assets, net	—	—	12	38	—	50
Total Assets	$ 29,264	$ 43,326	$ 8,377	$ 19,260	$ (76,210)	$ 24,017
Liabilities and Stockholders' Equity (Deficit)						
Current Liabilities:						
Accounts payable	$ —	$ 1	$ 195	$ 433	$ —	$ 629
Current portion of long-term debt	—	—	2	13	—	15
Accrued payroll and employee benefits	—	—	186	32	—	218
Accrued interest	11	90	—	7	—	108
Current portion of deferred revenue	—	—	119	148	—	267
Due to affiliates	—	—	37,990	—	(37,990)	—
Other	—	—	115	64	—	179
Total Current Liabilities	11	91	38,607	697	(37,990)	1,416
Long-Term Debt, less current portion	591	10,092	15	168	—	10,866
Deferred Revenue, less current portion	—	—	680	297	—	977
Other Liabilities	15	—	133	484	—	632
Commitments and Contingencies						
Stockholders' Equity (Deficit)	28,647	33,143	(31,058)	17,614	(38,220)	10,126
Total Liabilities and Stockholders' Equity (Deficit)	$ 29,264	$ 43,326	$ 8,377	$ 19,260	$ (76,210)	$ 24,017

Condensed Consolidating Statements of Cash Flows
For the year ended December 31, 2016

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Net Cash (Used in) Provided by Operating Activities	$ (49)	$ (468)	$ 564	$ 2,296	$ —	$ 2,343
Cash Flows from Investing Activities:						
Capital expenditures	—	—	(704)	(630)	—	(1,334)
Change in restricted cash and securities, net	5	—	6	1	—	12
Proceeds from sale of property, plant and equipment and other assets	—	—	1	2	—	3
Net Cash Provided by (Used in) Investing Activities	5	—	(697)	(627)	—	(1,319)
Cash Flows from Financing Activities:						
Long-term debt borrowings, net of issuance costs	—	764	—	—	—	764
Payments on and repurchases of long-term debt, including current portion and refinancing costs	—	(806)	(1)	(13)	—	(820)
Increase (decrease) due from/to affiliates, net	47	504	1,107	(1,658)	—	—
Net Cash Provided by (Used in) Financing Activities	47	462	1,106	(1,671)	—	(56)
Effect of Exchange Rates on Cash and Cash Equivalents	—	—	—	(3)	—	(3)
Net Change in Cash and Cash Equivalents	3	(6)	973	(5)	—	965
Cash and Cash Equivalents at Beginning of Year	12	6	727	109	—	854
Cash and Cash Equivalents at End of Year	$ 15	$ —	$ 1,700	$ 104	$ —	$ 1,819

Condensed Consolidating Statements of Cash Flows
For the year ended December 31, 2015

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Net Cash Provided by (Used in) Operating Activities	$ (40)	$ (617)	$ 193	$ 2,319	$ —	$ 1,855
Cash Flows from Investing Activities:						
Capital expenditures	—	—	(453)	(776)	—	(1,229)
Cash related to deconsolidated Venezuela operations	—	—	—	(83)	—	(83)
Change in restricted cash and securities, net	(25)	—	3	—	—	(22)
Proceeds from sale of property, plant and equipment and other assets	—	—	—	4	—	4
Other	—	—	(14)	—	—	(14)
Net Cash Provided by (Used in) Investing Activities	(25)	—	(464)	(855)	—	(1,344)
Cash Flows from Financing Activities:						
Long-term debt borrowings, net of issuance costs	—	4,832	—	—	—	4,832
Payments on and repurchases of long-term debt, including current portion and refinancing costs	(313)	(4,725)	(2)	(11)	—	(5,051)
Increase (decrease) due from/to affiliates, net	383	511	693	(1,587)	—	—
Net Cash Provided by (Used in) Financing Activities	70	618	691	(1,598)	—	(219)
Effect of Exchange Rates on Cash and Cash Equivalents	—	—	—	(18)	—	(18)
Net Change in Cash and Cash Equivalents	5	1	420	(152)	—	274
Cash and Cash Equivalents at Beginning of Year	7	5	307	261	—	580
Cash and Cash Equivalents at End of Year	$ 12	$ 6	$ 727	$ 109	$ —	$ 854

Condensed Consolidating Statements of Cash Flows
For the year ended December 31, 2014

(dollars in millions)	Level 3 Communications, Inc.	Level 3 Financing, Inc.	Level 3 Communications, LLC	Other Non-Guarantor Subsidiaries	Eliminations	Total
Net Cash Provided by (Used in) Operating Activities	$ (178)	$ (458)	$ 625	$ 1,172	$ —	$ 1,161
Cash Flows from Investing Activities:						
Capital expenditures	—	—	(362)	(548)	—	(910)
Change in restricted cash and securities, net	—	—	2	(12)	—	(10)
Proceeds from sale of property, plant and equipment and other assets	—	—	—	3	—	3
Investment in tw telecom, net of cash acquired	(474)	—	—	307	—	(167)
Other	—	—	—	(2)	—	(2)
Net Cash Provided by (Used in) Investing Activities	(474)	—	(360)	(252)	—	(1,086)
Cash Flows from Financing Activities:						
Long-term debt borrowings, net of issuance costs	590	—	—	(1)	—	589
Payments on and repurchases of long-term debt, including current portion and refinancing costs	(647)	—	—	(24)	—	(671)
Increase (decrease) due from/to affiliates, net	708	457	(305)	(860)	—	—
Net Cash Provided by (Used in) Financing Activities	651	457	(305)	(885)	—	(82)
Effect of Exchange Rates on Cash and Cash Equivalents	—	—	—	(44)	—	(44)
Net Change in Cash and Cash Equivalents	(1)	(1)	(40)	(9)	—	(51)
Cash and Cash Equivalents at Beginning of Year	8	6	347	270	—	631
Cash and Cash Equivalents at End of Year	$ 7	$ 5	$ 307	$ 261	$ —	$ 580

(17) Unaudited Quarterly Financial Data

	Three Months Ended							
	March 31,		June 30,		September 30,		December 31,	
	2016	2015	2016	2015	2016	2015	2016	2015
(dollars in millions except per share data)								
Revenue	$ 2,051	$ 2,053	$ 2,056	$ 2,061	$ 2,033	$ 2,062	$ 2,032	$ 2,053
Costs and Expenses:								
Network Access Costs	694	723	676	696	675	706	680	708
Network Related Expenses	338	356	339	363	337	369	332	344
Depreciation and Amortization	301	288	310	288	319	296	320	294
Selling, General and Administrative Expenses	356	370	357	364	348	364	346	369
Total Costs and Expenses	1,689	1,737	1,682	1,711	1,679	1,735	1,678	1,715
Operating Income	362	316	374	350	354	327	354	338
Other Income (Expense):								
Interest Income	1	1	1	—	1	—	1	—
Interest Expense	(135)	(180)	(140)	(165)	(139)	(145)	(132)	(152)
Loss on Modification and Extinguishment of Debt	—	—	(40)	(163)	—	—	—	(55)
Venezuela Deconsolidation Charge	—	—	—	—	—	(171)	—	—
Other, net	(10)	(10)	(5)	(17)	1	6	(6)	3
Total Other Expense	(144)	(189)	(184)	(345)	(137)	(310)	(137)	(204)
Income Before Income Taxes	218	127	190	5	217	17	217	134
Income Tax (Expense) Benefit	(90)	(5)	(34)	(18)	(74)	(16)	33	3,189
Net Income (Loss)	$ 128	$ 122	$ 156	$ (13)	$ 143	$ 1	$ 250	$ 3,323
Net Income (Loss) Per Share - Basic	$ 0.36	$ 0.35	$ 0.44	$ (0.04)	$ 0.40	$ —	$ 0.70	$ 9.33
Net Income (Loss) Per Share - Diluted	$ 0.36	$ 0.35	$ 0.43	$ (0.04)	$ 0.39	$ —	$ 0.69	$ 9.24

Net income (loss) per share for each quarter is computed using the weighted-average number of shares outstanding during that quarter, while net income (loss) per share for the year is computed using the weighted-average number of shares outstanding during the year. Thus, the sum of the income (loss) per share for each of the four quarters may not equal the net income (loss) per share for the year.

During the second quarter of 2016, we recognized a loss on modification and extinguishment of debt of $40 million , related to the redemption of the 7% Senior Notes due 2020.

In the second quarter of 2016, we recognized approximately $40 million income tax benefit related to the release of our German deferred tax valuation allowance.

In the fourth quarter of 2016, we recognized a $110 million income tax benefit related to the issuance of new regulations under Internal Revenue Code Section 987 addressing the taxation of foreign currency translation gains and losses arising from foreign branches.

In the fourth quarter of 2016, we recognized a $35 million income tax benefit related to releases of deferred tax valuation allowances primarily in Brazil.

In the fourth quarter of 2016, we recognized $16 million income tax expense related to income tax rate changes.

During the fourth quarter of 2015, we recognized a $3.3 billion income tax benefit primarily related to the release of U.S. federal and state deferred tax valuation allowances.

During the fourth quarter of 2015, we recognized a loss on extinguishment of debt of $55 million , related to the refinancing of the 8.625% Senior Notes due 2020.

During the second quarter of 2015, we recognized a loss on extinguishment of debt of $36 million , related to the refinancing of the 9.375% Senior Notes due 2019.

During the second quarter of 2015, we recognized a loss on extinguishment of debt of $82 million , related to the refinancing of the 8.125% Senior Notes due 2019.

During the second quarter of 2015, we recognized a loss on extinguishment of debt of $18 million , related to the refinancing of the 8.875% Senior Notes due 2019.

During the second quarter of 2015, we recognized a loss on modification and extinguishment of debt of $27 million , related to the refinancing of the senior secured Tranche B Term Loan due 2022.

(18) Subsequent Event

On February 22, 2017, we completed the refinancing of all of our outstanding $4.611 billion senior secured term loans through the issuance of a new Tranche B 2024 Term Loan in the amount of $4.611 billion . The term loans refinanced are our Tranche B-III 2019 Term Loan, Tranche B 2020 Term Loan, and the Tranche B-II 2022 Term Loan. The new Tranche B 2024 Term Loan bears interest at LIBOR plus 2.25 percent, with a zero percent minimum LIBOR, and will mature on February 22, 2024. The Tranche B 2024 Term Loan was priced to lenders at par, with the payment to the lenders at closing of an upfront 25 basis point fee.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, this February 24, 2017

LEVEL 3 COMMUNICATIONS, INC.
By: /s/ Jeff K. Storey
Name: Jeff K. Storey
Title: President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Title	Date
/s/ James O. Ellis, Jr. James O. Ellis, Jr.	Chairman of the Board	February 24, 2017
/s/ Jeff K. Storey Jeff K. Storey	President and Chief Executive Officer and Director (Principal Executive Officer)	February 24, 2017
/s/ Sunit S. Patel Sunit S. Patel	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 24, 2017
/s/ Eric J. Mortensen Eric J. Mortensen	Senior Vice President and Controller (Principal Accounting Officer)	February 24, 2017
/s/ Kevin P. Chilton Kevin P. Chilton	Director	February 24, 2017
/s/ Steven T. Clontz Steven T. Clontz	Director	February 24, 2017
/s/ Irene M. Esteves Irene M. Esteves	Director	February 24, 2017
/s/ T. Michael Glenn T. Michael Glenn	Director	February 24, 2017
/s/ Spencer B. Hays Spencer B. Hays	Director	February 24, 2017
/s/ Michael J. Mahoney Michael J. Mahoney	Director	February 24, 2017
/s/ Kevin W. Mooney Kevin W. Mooney	Director	February 24, 2017
/s/ Peter Seah Lim Huat Peter Seah Lim Huat	Director	February 24, 2017
/s/ Peter van Oppen Peter van Oppen	Director	February 24, 2017

Exhibit 12

STATEMENTS RE COMPUTATION OF RATIOS

STATEMENT REGARDING COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES

	Fiscal Year Ended				
(In millions)	**2016**	**2015**	**2014**	**2013**	**2012**
Income (Loss) from Continuing Operations Before Taxes	$ 842	$ 283	$ 238	$ (71)	$ (374)
Interest on Debt, Net of Capitalized Interest	546	642	654	649	733
Amortization of Capitalized Interest	—	—	—	—	—
Portion of rents deemed representative of the interest factor (1/3)	115	119	104	101	101
Earnings Available for Fixed Charges	$ 1,503	$ 1,044	$ 996	$ 679	$ 460
Interest on Debt	$ 546	$ 642	$ 654	$ 649	$ 733
Preferred Dividends	—	—	—	—	—
Interest Expense Portion of Rental Expense	115	119	104	101	101
Total Fixed Charges	$ 661	$ 761	$ 758	$ 750	$ 834
Ratio of Earnings to Fixed Charges	2.3	1.4	1.3	—	—
Deficiency	$ —	$ —	$ —	$ (71)	$ (374)

Exhibit 21

Level 3 Communications, Inc.
Subsidiaries of the Registrant

Entity Name	Domestic Jurisdiction	Country
650 Townsend Facility Company, LLC	California	United States
ACME Grating Ventures, L.L.C.	Delaware	United States
Ameritel Management, Inc.	British Columbia	Canada
AmSoft Information Services Limited	Mauritius	Mauritius
Broadwing Communications, LLC	Delaware	United States
Broadwing, LLC	Delaware	United States
BTE Equipment, LLC	Delaware	United States
CCC Canada Holding, Inc.	Delaware	United States
Continental Holdings Inc.	Wyoming	United States
Continental Level 3, Inc.	Delaware	United States
Continental Mineral Sales, Inc.	Delaware	United States
Corvis Canada Inc.	Federally Chartered	Canada
Corvis Gratings Company	Nova Scotia	Canada
Eldorado Acquisition Two, Inc.	Delaware	United States
Fibernet UK Limited	United Kingdom	United Kingdom
Front Range Insurance Company, Inc.	Hawaii	United States
FTV Communications, LLC	Delaware	United States
GC Impsat Holdings I Limited	United Kingdom	United Kingdom
GC Impsat Holdings II Limited	United Kingdom	United Kingdom
GC Pan European Crossing UK Limited	United Kingdom	United Kingdom
Global Crossing Americas Solutions, LLC	Delaware	United States
Global Crossing International Networks Ltd.	Bermuda	Bermuda
Global Crossing International, Ltd.	Bermuda	Bermuda
Global Crossing Local Services, Inc.	Michigan	United States
Global Crossing North America, Inc.	New York	United States
Global Crossing North American Holdings, Inc.	Delaware	United States
Global Crossing Telecommunications, Inc.	Michigan	United States
Global Crossing Telecommunications-Canada, Ltd.	Federally Chartered	Canada
Global Crossing Telemanagement VA, LLC	Virginia	United States
Impsat Fiber Networks, LLC	Delaware	United States
IP Networks, Inc.	Delaware	United States
KMI Continental Lignite, Inc.	Delaware	United States
Legend Circle Holdings, Inc.	Delaware	United States
Level 3 Argentina, S.A.	Argentina	Argentina
Level 3 Asia, Inc.	Delaware	United States
Level 3 CDN International, Inc.	Delaware	United States
Level 3 Chile S.A.	Chile	Chile
Level 3 Colombia S.A.	Colombia	Colombia
Level 3 Communications (Asia Pacific) Limited	Hong Kong	Hong Kong
Level 3 Communications (IMPSAT) Nederland B.V.	Netherlands	Netherlands
Level 3 Communications (Ireland) Limited	Ireland	Ireland
Level 3 Communications A.B.	Sweden	Sweden
Level 3 Communications ApS	Denmark	Denmark
Level 3 Communications Australia Pty Ltd	Australia	Australia
Level 3 Communications Austria GmbH	Austria	Austria
Level 3 Communications Canada Co.	Nova Scotia	Canada

Level 3 Communications EOOD	Bulgaria	Bulgaria
Level 3 Communications Espaňa S.A.	Spain	Spain
Level 3 Communications Estonia OÜ	Estonia	Estonia
Level 3 Communications Europe Limited	United Kingdom	United Kingdom
Level 3 Communications France SARL	France	France
Level 3 Communications GmbH	Germany	Germany
Level 3 Communications Hong Kong Limited	Hong Kong	Hong Kong
Level 3 Communications Iceland ehf.	Iceland	Iceland
Level 3 Communications Italia S.R.L.	Italy	Italy
Level 3 Communications Japan KK	Japan	Japan
Level 3 Communications Kft	Hungary	Hungary
Level 3 Communications Limited	Ireland	Ireland
Level 3 Communications Limited	United Kingdom	United Kingdom
Level 3 Communications of Virginia, Inc.	Virginia	United States
Level 3 Communications Oy	Finland	Finland
Level 3 Communications PEC Ireland Limited	Ireland	Ireland
Level 3 Communications PEC Luxembourg I S.á.r.l.	Luxembourg	Luxembourg
Level 3 Communications PEC Luxembourg II S.á.r.l.	Luxembourg	Luxembourg
Level 3 Communications PEC Services Europe Limited	Ireland	Ireland
Level 3 Communications PEC Services Ireland Limited	Ireland	Ireland
Level 3 Communications PEC Telekomünikasyon Hizmetleri Limited Şirketi	Turkey	Turkey
Level 3 Communications PEC Ukraine LLC	Ukraine	Ukraine
Level 3 Communications RS d.o.o.	Serbia	Serbia
Level 3 Communications S.A.	Belgium	Belgium
Level 3 Communications S.R.L.	Romania	Romania
Level 3 Communications s.r.o.	Czech Republic	Czech Republic
Level 3 Communications Singapore Pte. Ltd.	Singapore	Singapore
Level 3 Communications South Africa (Pty) Limited	South Africa	South Africa
Level 3 Communications Sp. z o. o.	Poland	Poland
Level 3 Communications spol. s.r.o.	Slovakia	Slovak Republic
Level 3 Communications St. Croix, Inc.	Virgin Islands (US)	United States
Level 3 Communications Switzerland AG	Switzerland	Switzerland
Level 3 Communications UK Limited	United Kingdom	United Kingdom
Level 3 Communications, B.V.	Netherlands	Netherlands
Level 3 Communications, Inc.	Delaware	United States
Level 3 Communications, LLC	Delaware	United States
Level 3 Comunicacoes do Brasil Ltda.	Brazil	Brazil
Level 3 Ecuador LVLT S.A.	Ecuador	Ecuador
Level 3 EMEA Holdings Limited	United Kingdom	United Kingdom
Level 3 Enhanced Services, LLC	Delaware	United States
Level 3 EON, LLC	Delaware	United States
Level 3 Europe B.V.	Netherlands	Netherlands
Level 3 Financing, Inc.	Delaware	United States
Level 3 GC Limited	Bermuda	Bermuda
Level 3 Holdings, B.V.	Netherlands	Netherlands
Level 3 Holdings, Inc.	Delaware	United States
Level 3 International Services, Inc.	Delaware	United States
Level 3 International, Inc.	Delaware	United States
Level 3 Komunikacijske Usluge d.o.o.	Croatia	Croatia
Level 3 Latin American Solutions, LLC	Delaware	United States
Level 3 Mexico II, S. de R.L. de C.V.	Mexico	Mexico

Level 3 Mexico Landing S. de R.L.	Mexico	Mexico
Level 3 Mexico Servicios, S. de R. L. de C. V.	Mexico	Mexico
Level 3 Mexico, S. de R.L. de C.V.	Mexico	Mexico
Level 3 Panama, Inc.	Panama	Panama
Level 3 Participacoes e Comercial Ltd.	Brazil	Brazil
Level 3 PEC Norge AS	Norway	Norway
Level 3 Peru S.A.	Peru	Peru
Level 3 Telecom Data Services, LLC	Delaware	United States
Level 3 Telecom Holdings II, LLC	Delaware	United States
Level 3 Telecom Holdings, LLC	Delaware	United States
Level 3 Telecom Management Co., LLC	Delaware	United States
Level 3 Telecom of Alabama, LLC	Delaware	United States
Level 3 Telecom of Arizona, LLC	Delaware	United States
Level 3 Telecom of Arkansas, LLC	Delaware	United States
Level 3 Telecom of California, LP	Delaware	United States
Level 3 Telecom of Colorado, LLC	Delaware	United States
Level 3 Telecom of D.C., LLC	Delaware	United States
Level 3 Telecom of Florida, LP	Delaware	United States
Level 3 Telecom of Georgia, LP	Delaware	United States
Level 3 Telecom of Hawaii, LP	Delaware	United States
Level 3 Telecom of Idaho, LLC	Delaware	United States
Level 3 Telecom of Illinois, LLC	Delaware	United States
Level 3 Telecom of Indiana, LP	Delaware	United States
Level 3 Telecom of Iowa, LLC	Delaware	United States
Level 3 Telecom of Kansas City, LLC	Delaware	United States
Level 3 Telecom of Kentucky, LLC	Delaware	United States
Level 3 Telecom of Louisiana, LLC	Delaware	United States
Level 3 Telecom of Maryland, LLC	Delaware	United States
Level 3 Telecom of Minnesota, LLC	Delaware	United States
Level 3 Telecom of Mississippi, LLC	Delaware	United States
Level 3 Telecom of Nevada, LLC	Delaware	United States
Level 3 Telecom of New Jersey, LP	Delaware	United States
Level 3 Telecom of New Mexico, LLC	Delaware	United States
Level 3 Telecom of New York, LP	Delaware	United States
Level 3 Telecom of North Carolina, LP	Delaware	United States
Level 3 Telecom of Ohio, LLC	Delaware	United States
Level 3 Telecom of Oklahoma, LLC	Delaware	United States
Level 3 Telecom of Oregon, LLC	Delaware	United States
Level 3 Telecom of South Carolina, LLC	Delaware	United States
Level 3 Telecom of Tennessee, LLC	Delaware	United States
Level 3 Telecom of Texas, LLC	Delaware	United States
Level 3 Telecom of Utan, LLC	Delaware	United States
Level 3 Telecom of Virginia, LLC	Virginia	United States
Level 3 Telecom of Washington, LLC	Delaware	United States
Level 3 Telecom of Wisconsin, LP	Delaware	United States
Level 3 Telecom, LLC	Delaware	United States
Level 3 Telecom, LP	Delaware	United States
Level 3 telekomunikacijske d.o.o.	Slovenia	Slovenia
Level 3 Venezuela S.A.	Venezuela	Venezuela
Level Three Communications Costa Rica, S.R.L.	Costa Rica	Costa Rica
Level Three Communications Israel Ltd.	Israel	Israel
Level Three Communications Kenya Limited	Kenya	Kenya
Level 3 Communications S.a.r.l.	Luxembourg	Luxembourg

Exhibit 21

OOO "Level 3 Communications"	Russian Federation	Russian Federation
SAC Brasil Comunicações Ltda.	Brazil	Brazil
SAC Brasil Holding Ltda.	Brazil	Brazil
SAC Peru S.R.L.	Peru	Peru
TelCove of Pennsylvania, LLC	Delaware	United States
TelCove Operations, LLC	Delaware	United States
The IRC Company, Inc.	Delaware	United States
Vyvx, LLC	Delaware	United States
Williams Communicaciones Chile Limitada	Chile	Chile
WilTel Communications (Cayman) Limited	Cayman Islands	Cayman Islands
WilTel Communications Network, Inc.	New Brunswick	Canada
WilTel Communications Pty Limited	New South Wales	Australia
WilTel Communications, LLC	Delaware	United States
WilTel International Telecom (Chile) Limited	Cayman Islands	Cayman Islands
XCOM Technologies of New York, Inc.	New York	United States
Xspedius Management Co. International, LLC	Delaware	United States

Exhibit 23

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Level 3 Communications, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-53914, 333-156709, 333-160493, 333-162854, and 333-178060) on Form S-3 and the registration statements (Nos. 333-79533, 333-42465, 333-68447, 333-58691, 333-52697, 333-115472, 333-115751, 333-174354, 333-177977, 333-189832, 333-205075, and 333-208892) on Form S-8 of Level 3 Communications, Inc. of our reports dated February 24, 2017, with respect to the consolidated balance sheets of Level 3 Communications, Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of income, comprehensive income, cash flows, and changes in stockholders' equity for each of the years in the three-year period ended December 31, 2016, and the effectiveness of internal control over financial reporting as of December 31, 2016, which reports appear in the December 31, 2016 annual report on Form 10-K of Level 3 Communications, Inc.

/s/ KPMG LLP

Denver, Colorado
February 24, 2017

Exhibit 31.1

CERTIFICATIONS*

I, Jeff K. Storey, certify that:

1. I have reviewed this Form 10-K of Level 3 Communications, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2017

/s/ Jeff K. Storey

Jeff K. Storey
Chief Executive Officer

* Provide a separate certification for each principal executive officer and principal financial officer of the registrant. See Rules 13a-14(a) and 15d-14(a).

Exhibit 31.2

CERTIFICATIONS*

I, Sunit S. Patel, certify that:

1. I have reviewed this Form 10-K of Level 3 Communications, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2017

/s/ Sunit S. Patel

Sunit S. Patel

Chief Financial Officer

* Provide a separate certification for each principal executive officer and principal financial officer of the registrant. See Rules 13a-14(a) and 15d-14(a).

Exhibit 32.1

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Level 3 Communications, Inc. (the “Company”) for the year ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Jeff K. Storey, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Jeff K. Storey

Jeff K. Storey
Chief Executive Officer
February 24, 2017

Exhibit 32.2

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Level 3 Communications, Inc. (the “Company”) for the year ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Sunit S. Patel, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Sunit S. Patel

Sunit S. Patel
Chief Financial Officer
February 24, 2017

Attachment 4

COMPETITIVE LOCAL EXCHANGE CARRIER
RESALE AND FACILITIES-BASED TARIFF
Regulations and Schedule of Charges

The Company will mirror the exchange area boundaries as stated in the tariffs of the Companies listed on Page 68 of this tariff. which include Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; The United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company Telephone – PA P.U.C. No. 2 and South [C]
Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

The Company's tariff is in concurrence with all applicable State and Federal Laws (including, but not limited to, 52 Pa. Code, 66 Pa. C.S. and the Telecommunications Act of 1934, as amended), and with the Commission's applicable Rules and Regulations and Orders. Any provisions contained in this Tariff that are inconsistent with the foregoing mentioned will be deemed inoperative and superseded.

Issued By: General Counsel - Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER
RESALE AND FACILITIES-BASED TARIFF
Regulations and Schedule of Charges

The Company will mirror the exchange area boundaries as stated in the tariffs of the Companies listed on Page 68 of this tariff, which include Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; The United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc.
Telephone – PA P.U.C. No. 2, North Penn Telephone Company Telephone – PA P.U.C. No. 2 and South [C]
Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

The Company's tariff is in concurrence with all applicable State and Federal Laws (including, but not limited to, 52 Pa. Code, 66 Pa. C.S. and the Telecommunications Act of 1934, as amended), and with the Commission's applicable Rules and Regulations and Orders. Any provisions contained in this Tariff that are inconsistent with the foregoing mentioned will be deemed inoperative and superseded.

Issued By: General Counsel – Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

CHANGE PAGE

Supplement No. 12

Supplement No. 12 to Pa P.U.C. Tariff No. 3 provides for the following:

Addition of Rural Exchanges	Pages 40.3
Addition of Local Calling Areas for Rural Exchanges	Pages 42.4
Addition of reference to RLEC Company Boundary Maps and their corresponding Tariff Nos.	Page 68

Issued By: General Counsel – Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

CHECK SHEET

The Title page and pages 1 through 68, inclusive, of this tariff are effective as of the date shown.

SHEET	REVISION	SHEET	REVISION	SHEET	REVISION
1	*8th Revised	31	Original	48	First Revised
1A	*9th Revised	32	Original	49	First Revised
2	*11th Revised	33	Original	50	Original
3	Original	34	Original	51	Second Revised
4	Original	35	Original	52	First Revised
5	Original	36	Original	53	Original
6	Original	37	Original	54	Original
7	Original	38	Original	55	Original
8	Original	39	1st Revised	56	Original
9	Original	40	First Revised	57	Original
10	Original	40.1	First Revised	58	Original
11	Original	40.2	Original	59	Original
12	Original	40.3*	3rd Revised	60	2nd Revised
13	Original	41	First Revised	61	1st Revised
14	Original	41.1	Original	62	1st Revised
15	Original	41.2	Original	63	1st Revised
16	Original	41.3	Original	64	1st Revised
17	1st Revised	41.4	Original	65	Original
17.1	Original	41.5	Original	66	Original
18	2nd Revised	41.6	Original	67	Original
18.1	Original	41.7	Original	68*	4th Revised
18.2	Original	42	3rd Revised		
19	2nd Revised	42.1	Original		
20	Original	42.2	Original		
21	Original	42.3	Original		
22	Original	42.4*	3rd Revised		
23	Original	43	2nd Revised		
24	Original	43.1	2nd Revised		
25	Original	43.1.1	Original		
26	Original	43.2	Original		
27	Original	44	1st Revised		
28	Original	45	1st Revised		
29	Original	46	1st Revised		
30	Original	47	1st Revised		

*Indicates new or revised page.

Issued By: General Counsel – Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

TABLE OF CONTENTS

DESCRIPTION **PAGE NUMBER**

SECTION

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

TABLE OF CONTENTS (CONT'D)

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

TABLE OF CONTENTS (CONT'D)

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

EXPLANATION OF SYMBOLS

The following symbols shall be used in this tariff for the purposes indicated below.

(C) To signify changed listing, rule, or condition which may affect rates or charges.

(D) To signify a rate decrease.

(I) To signify a rate increase.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

APPLICATION OF TARIFF

This Tariff contains the regulations and rates applicable to local exchange services provided by Company to business Customers for telecommunications between points within the State of Pennsylvania. Residential service will be made available at the business rates until such time that Company is able to offer residential service. This tariff is in compliance with Title 52 of the Pennsylvania Administrative Code Chapters 63 and 64. Company's services are furnished subject to the availability of facilities and capacity and subject to the terms and conditions of this Tariff.

The rates and regulations contained in this Tariff apply only to the services furnished by Company and do not apply, unless otherwise specified, to the lines, facilities, or services provided by a local exchange telephone company or other common carrier for use in accessing the services of Company. Company will not have the capability to provide competitive local exchange services according to this tariff until the first (1st) quarter of year 2001.

The Customer is entitled to limit the use of Company's services by end users at the Customer's facilities, and may use other common carriers in addition to or in lieu of Company.

SECTION 1 - DEFINITION OF TERMS

Certain terms used generally throughout this tariff for Communications Service of this Company are defined below.

Advance Payment: Part or all of a payment required before the start of service.

Authorized User: A person, firm or corporation which is authorized by the Customer or Joint User to be connected to the service of the Customer or Joint User, respectively.

Bit: The smallest unit of information in the binary system of notation.

Commission: Pennsylvania Public Utility Commission.

Company: Level 3 Communications, LLC, the issuer of this tariff.

Customer: The person, firm or corporation which purchases service and is responsible for the payment of charges and compliance with the Company's regulations.

Dedicated: A facility or equipment system or subsystem set aside for the sole use of a specific Customer.

End Office: The term "end office" denotes the switching system office or serving wire center where Customer station loops are terminated for purposes of interconnection to each other and/or to trunks.

Joint User: A person, firm or corporation which is designated by the Customer as a user of services furnished to the Customer by the Company and to whom a portion of the charges for the service will be billed under a Joint User arrangement as specified in the Company's tariff.

LATA: A Local Access and Transport Area established pursuant to the Modification of Final Judgment entered by the United States District Court for the District of Columbia in Civil Action No. 82-0192; or any other geographic area designated as a LATA in the National Exchange Carrier Association, Inc. Tariff F.C.C. No. 4.

Major Service Interruption: An interruption of Customer service due to the Company's negligence or due to its noncompliance with the provisions of this tariff.

Premises: The space occupied by a Customer, Authorized User or Joint User in a building or buildings or contiguous property (except railroad rights-of-way, etc.) not separated by a highway.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 1 - DEFINITION OF TERMS (CONT'D)

Recurring Charges: The monthly charges to the Customer for services, facilities and equipment, which continue for the agreed upon duration of the service.

Service Commencement Date: The first day following the date on which the Company notifies the Customer that the requested service or facility is available for use, unless extended by the Customer's refusal to accept service which does not conform to standards set forth in the Service Order or the tariffs of the Company, in which case the Service Commencement Date is the date of the Customer's acceptance. The Company and Customer may mutually agree on a substitute Service Commencement Date.

Service Order: The written request for Company Services submitted by the Customer in the format devised by the Company. The signing of a Service Order by the Customer and acceptance by the Company initiates the respective obligations of the parties as set forth herein and pursuant to the tariffs of the Company, but the duration of the service is calculated from the Service Commencement Date.

Shared: A facility or equipment system or subsystem that can be used simultaneously by several Customers.

Transmission: The sending of electrical or optical signals over a line to a destination.

User: A Customer, Joint User, or any other person authorized by a Customer to use service provided to the Customer under a Level 3 Communications, LLC tariff.

SECTION 2 - UNDERTAKING OF THE COMPANY

2.1 General

2.1.1 The Company does not undertake to transmit messages but offers the use of its facilities for the transmission of communications.

2.1.2 Customers and Users may use services and facilities provided under the tariffs of the Company to obtain access to services offered by other companies. The Company is responsible for the services and facilities provided under its tariffs, and for its unregulated services provided pursuant to contract, and it assumes no responsibility for any service (whether regulated or not) provided by any other entity that purchases access to the Company network in order to originate or terminate such entity's own services, or to communicate with such entity's own Customers.

2.1.3 The Company shall have no responsibility with respect to billings, charges or disputes related to services used by the Customer which are not included in the services herein including, without limitation, any local, regional or long distance services not offered by the Company. The Customer shall be fully responsible for the payment of any bills for such services and for the resolution of any disputes or discrepancies with the service provider.

2.2 Description of Service

Level 3 Communications, LLC Service consists of any of the business services offered pursuant to this tariff, either individually or in combination. Each business service is offered independent of the others, unless otherwise noted. Service is offered via the Company's facilities or in combination with transmission facilities provided by other certificated carriers.

2.3 Application for Service

Customers desiring to obtain Level 3 Communications, LLC service must complete the Company's standard service order form(s).

2.4 Shortage of Equipment or Facilities

2.4.1 The Company reserves the right to limit or to allocate the use of existing facilities, or of additional facilities offered by the Company, when necessary because of lack of facilities, or due to some other cause beyond the Company's control, on a nondiscriminatory basis.

2.4.2 The furnishing of service under the tariffs of the Company is subject to the availability on a continuing basis of all the necessary facilities and is limited to the reasonable capacity of the Company's facilities as well as facilities the Company may obtain from other carriers to furnish service from time to time as required at the sole discretion of the Company.

2.5 Terms and Conditions

2.5.1 Customers may be required to enter into written service orders which shall contain or reference a specific description of the service ordered, the rates to be charged, the duration of the services, and the terms and conditions in the tariffs of the Company. Customer will also be required to execute any other documents as may be reasonably requested by the Company.

2.5.2 At the expiration of the initial term specified in each Service Order, or in any extension thereof, service shall continue on a month to month basis at the then current rates unless terminated by either party. Any termination shall not relieve Customer of its obligation to pay any charges incurred under the service order and the tariffs of the Company prior to termination. The rights and obligations which by their nature extend beyond the termination of the term of the service order shall survive such termination.

2.5.3 The tariffs of the Company shall be interpreted and governed by the laws of the State of Pennsylvania.

2.6 Liability of the Company

2.6.1 The liability of the Company for damages arising out of the furnishing of its Services, including but not limited to mistakes, omissions, interruptions, delays, or errors, or other defects, representations, or use of these services or arising out of the failure to furnish the service, whether caused by acts or omissions, shall be limited to the extension of allowances for interruption as set forth in Section 9.0, following. The extension of such allowances for interruption shall be the sole remedy of the Customer and the sole liability of the Company. The Company will not be liable for any direct, indirect, incidental, special, consequential, exemplary or punitive damages to Customer or User as a result of any Company service, equipment or facilities, or the acts or omissions or negligence of the Company or Company's employees or agents.

2.6.2 The Company shall not be liable for any delay or failure of performance or equipment due to causes beyond its control, including but not limited to: acts of God, fire, flood, explosion or other catastrophes; any law, order, regulation, direction, action, or request of the United States Government, or of any other government, including state and local governments having or claiming jurisdiction over the Company, or of any department, agency, commission, bureau, corporation, or other instrumentality of any one or more of these federal, state, or local governments, or of any civil or military authority, national emergencies, insurrections, riots, wars, unavailability of rights-of-way or materials, or strikes, lockouts, work stoppages, or other labor difficulties.

2.6.3 The Company shall not be liable for any act or omission of any entity furnishing to the Company or to the Company's Customers or Users facilities or equipment used for or with the services the Company offers.

2.6.4 The Company shall not be liable for any damages or losses due to the fault or negligence of the Customer or User or due to the failure or malfunction of Customer or User-provided equipment or facilities.

2.6.5 The Company does not guarantee nor make any warranty with respect to installations it provides for use in an explosive atmosphere. The Customer shall indemnify and hold the Company harmless from any and all loss, claims, demands, suits, or other action, or any liability whatsoever, whether suffered, made, instituted, or asserted by any other party or person(s), and for any loss, damage, or destruction of any property, whether owned by the Customer or others, caused or claimed to have been caused directly or indirectly by the installation, operation, failure to operate, maintenance, removal presence, condition, location, or use of any installation so provided.

2.6.6 The Company reserves the right to require each Customer to sign an agreement acknowledging acceptance of the provisions of this paragraph as a condition precedent to such installations.

2.6.7 The Company is not liable for any defacement of or damage to Customer or User premises resulting from the furnishing of services or equipment on such premises or the installation or removal thereof, unless such defacement or damage is caused by negligence or willful misconduct of the Company's agents or employees.

2.6.8 The entire liability for any claim, loss, damage or expense from any cause whatsoever shall in no event exceed sums actually paid the Company by Customer for the specific services giving rise to the claim. No action or proceeding against the Company shall be commenced more than one year after the service is rendered, or as required by Pennsylvania Law.

2.6.9 The Company shall not be liable for any damages or losses due to the fault or negligence of the Customer or due to the failure or malfunction of Customer provided equipment or facilities.

2.6.10 The Company shall not be liable for any damages resulting from delays in meeting any service dates due to delays resulting from normal construction procedures. Such delays shall include, but not be limited to, delays in obtaining necessary regulatory approvals for construction, delays in obtaining right-of-way approvals and delays in actual construction work.

2.6.11 The Company shall not be liable for any damages whatsoever to property resulting from the installation, maintenance, repair or removal of equipment and associated wiring unless the damage is caused by the Company's willful misconduct or negligence.

2.6.12 **THE COMPANY MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, EXCEPT THOSE EXPRESSLY SET FORTH IN ITS TARIFFS.**

2.6.13 The Company shall not be liable for any damages whatsoever associated with service, facilities, or equipment which the Company does not furnish or for any act or omission of Customer or any other entity furnishing services, facilities or equipment used for or in conjunction with Level 3 Communications, LLC.

2.7 Notification of Service-Affecting Activities

To the extent possible, the Company will provide the Customer reasonable notification of service-affecting activities that may occur in normal operation of its business. Such activities may include, but are not limited to, equipment or facilities additions, removals or rearrangements and routine preventative maintenance. Generally, such activities are not specific to an individual Customer but affect many Customers' services. No specific advance notification period is applicable to all service activities. The Company will work cooperatively with the Customer to determine the reasonable notification requirements. With some emergency or unplanned service-affecting conditions, such as an outage resulting from cable damage, notification to the Customer may not be possible.

2.8 Provision of Equipment and Facilities

2.8.1 All services along the facilities between the point identified as the Company's origination point and the point identified as the Company's termination point will be furnished by the Company, its agents or contractors.

2.8.2 The Company may undertake to use reasonable efforts to make available services to a Customer on or before a particular date, subject to the provisions of and compliance by the Customer with, the regulations contained in this tariff.

2.8.3 The Company undertakes to use reasonable efforts to maintain only the facilities and equipment that it furnishes to the Customer. The Customer, Joint User, or Authorized

User may not, nor may they permit others to, rearrange, disconnect, remove, attempt to repair, or otherwise tamper with any of the facilities or equipment installed by the Company, except upon the written consent of the Company.

2.8.4 Equipment the Company provides or installs at the Customer's premises for use in connection with the services the Company offers shall not be used for any purpose other than that for which the Company provided the equipment.

2.8.5 The Customer shall be responsible for the payment of service charges as set forth herein for visits by the Company's agents or employees to the premises of the Customer, Joint User, or Authorized User when the service difficulty or trouble report results from the use of equipment or facilities the Customer, Joint User, or Authorized User provided.

2.8.6 The Company shall not be responsible for the installation, operation, or maintenance of any Customer provided communications equipment. Where such equipment is connected to the facilities furnished pursuant to this tariff, the responsibility of the Company shall be limited to the furnishing of facilities offered under this tariff and to the maintenance and operation of such facilities; subject to this responsibility the Company shall not be responsible for:

2.8.6.1 The transmission of signals by Customer provided equipment or for the quality of, or defects in, such transmission; or

2.8.6.2 The reception of signals by Customer provided equipment. The Customer, Authorized User, or Joint User is responsible for ensuring that Customer provided equipment connected to Company equipment and facilities is compatible with such Company equipment and facilities. The magnitude and character of the voltages and currents impressed on Company provided equipment and wiring by the connection, operation, or maintenance of such equipment and wiring shall be such as not to cause damage to the Company provided equipment and wiring or injury to the Company's employees or to other persons. Customer will submit to Company a complete manufacturer's specification sheet for each item of equipment that is not provided by the Company and which shall be attached to the Company's facilities. The Company shall approve the use of such item(s) of equipment unless such item is technically incompatible with Company's facilities. Any additional protective, equipment required to prevent such damage or injury shall be provided by the Company at the Customer's expense.

2.8.7 Any special interface equipment necessary to achieve compatibility between the facilities and equipment of the Company used for furnishing Level 3 Communications, LLC

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

services and the channels, facilities, or equipment of others shall be provided at the Customer's expense.

2.8.8 Level 3 Communications, LLC may be connected to the services or facilities of other communications carriers only when authorized by, and in accordance with, the terms and conditions of the tariffs of the other communications carrier which are applicable to such connections.

2.8.9 Network Interface Device (NID)

A physical piece of equipment (jack, block or other device) that provides the point of interconnection between a Customer's inside wiring and Company's at a Customer's designated premises. The physical point where Company's network and network responsibilities terminate and a Customer's responsibilities begin. It is the Company's responsibility to install the NID.

2.8.9.1 There is no charge for this equipment, but there may be an installation charge if the Customer wants the NID located in an unusual location.

2.9 Nonroutine Installation

At the Customer's request, installation and/or maintenance may be performed outside the Company's regular business hours and/or in hazardous locations. In such cases, charges based on cost of the actual labor, material, or other costs incurred by or charged to the Company will apply. If installation is started during regular business hours but, at the Customer's request, extends beyond regular business hours into time periods including, but not limited to, weekends, holidays, and/or night hours, additional charges may apply.

2.10 Ownership of Facilities

Title to all facilities provided in accordance with the tariffs of the Company remains with the Company, its agents or contractors. The Customer shall not have, nor shall it assert, any right, title or interest in all the fiber optic or other facilities and associated equipment provided by the Company hereunder.

2.11 Optional Rates and Information Provided to the Public

The Company will promptly advise Customers who may be affected of new, revised or optional rates applicable to their service. Pertinent information regarding the Company's services, rates and charges shall be provided directly to Customers, or shall be available for inspection at the Company's local business address.

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

2.12 Continuity of Service

In the event of prior knowledge of an interruption of service for a period exceeding one day, the Customers will, if feasible, be notified in writing, by mail, at least one week in advance.

2.13 Governmental Authorizations

The provision of services is subject to and contingent upon the Company obtaining and retaining such approvals, consents, governmental authorizations, licenses and permits, as may be required or be deemed necessary by the Company. The Company shall use reasonable efforts to obtain and keep in effect all such approvals, consents, authorizations, licenses and permits that may be required to be obtained by it. The Company shall be entitled to take, and shall have no liability whatsoever for, any action necessary to bring the Services into conformance with any rules, regulations, orders, decisions, or directives imposed by the Federal Communications Commission or other applicable agency, and the Customer shall fully cooperate in and take such action as may be requested by the Company to comply with any such rules, regulations, orders, decisions, or directives.

2.14 Universal and Enhanced Universal Emergency Telephone Number Service

2.14.1 Universal Emergency Telephone Number Service

Universal Emergency Telephone Number Service (911 Service) is an arrangement of Company central office and trunking facilities whereby any telephone user who dials the number 911 will reach the emergency report center for the telephone from which the number is dialed or will be routed to an operator if all lines to an emergency report center are busy. If no emergency report center customer exists for a central office entity, a telephone user who dials the number 911 will be routed to an operator. The telephone user who dials the 911 number will not be charged for the call.

2.14.1.1 Regulations

a, This service is furnished to municipalities and other governmental agencies only for the purpose of voice reporting of emergencies by the public. For this service, the municipality or government agency(s) designated by the customer as responsible for the control and staffing of the emergency report center is referred to as the “Agency”.

b. When 911 service replaces an existing emergency number, intercept service shall be the responsibility of the Agency. However, if the Agency is unable to provide this service, the operator will intercept and forward requests for emergency aid for a period of at least one year.

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

b

c. 911 service is furnished for incoming calls only.

2.14.1.2 Conditions of Furnishing Service C

2.14.1.2.a The Company's entire liability to the Customer or any person for interruption or failure of 9-1-1 service shall be limited by the terms set forth in this section. This 9-1-1 service is offered solely for the use of the Customer or to assist the Customer in providing 9-1-1 emergency service in conjunction with applicable fire, police and other public safety agencies. By providing this service to the Customer, the Company does not create any relationship or obligation, direct or indirect, to any third party other than the Customer.

2.14.1.2.b The Company shall not be liable for civil damages, whether in contract, tort or otherwise, to any person, corporation, or other entity for any loss or damage caused by any Company act or omission in the design, development, installation, maintenance or provision of 9-1-1 service other than an act or omission constituting gross negligence or wanton or willful misconduct. However, in no event shall the Company's liability to any person, corporation, or other entity for any loss or damage exceed an amount equal to the prorated allowance of the tariff rate for the service or facilities provided to the Customer for the time such interruption to service or facilities continues, after notice by the customer to the Company. No allowance shall be made if the interruption is due to the negligence or willful act of the Customer.

2.14.1.2.c The Customer shall indemnify, defend and hold harmless the Company from any damages, or other injuries which may be asserted by any person, business, governmental agency, or other entity against the Company or Customer or any of their employees, directors, officers, or agents except for Company acts of gross negligence or willful or wanton misconduct, in connection with developing, adopting, implementing, maintaining, or operating the 9-1-1 system or for releasing subscriber information in connection with the provision of the 9-1-1 service. The Company accepts no responsibility for obtaining subscriber record information from private telecommunications systems. C

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

2.14.1.2.d The Company shall not be liable or responsible for any indirect, incidental, or consequential damages associated with the provision of 9-1-1 service, including, by way of example and without limitation, when a failure or interruption of 9-1-1 service is due to the attachment of any equipment by a Customer to Company facilities. The Company shall not be liable for any civil damages caused by an act or omission of the Company in good faith release of information not in the public record, including non-published subscriber information, to emergency service providers responding to calls placed to a 9-1-1 service or host providers using such information to provide a 9-1-1 service.

2.14.1.2.e The Company is not responsible for any infringement or invasion of the right of privacy of any person or persons, caused, or claimed to have been caused, directly or indirectly, by the installation, operation, failure to operate, maintenance, removal, presence, condition, occasion or use of the 911 service features and the equipment associated therewith, including, but not limited to, the identification of the telephone number, address or name associated with the telephone used by the party or parties accessing the 911 service.

2.14.2 Enhanced Universal Telephone Number Service

Enhanced Universal Emergency Telephone Number Service (E91I Service) is a Call Delivery Network whereby any telephone user who dials the number 911 will reach a designated Public Safety Answering Point (PSAP). E911 Service is offered in the Company’s serving area subject to the availability of stored program control central office facilities, Enhanced 911 software, and ANI equipment. The telephone user who dials the 911 number will not be charged for the call.

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

2.14.2.1 Regulations

a. This tariff does not provide for the inspection or constant monitoring of facilities to discover errors, defects, or malfunctions in the service, nor does the company undertake such responsibility. The Agency shall make such operational tests as in their judgment are required to determine whether the system is functioning properly for its use. The Agency shall promptly notify the Company in the event the system is not functioning properly.

b. E911 information, consisting of the names, addresses, and telephone numbers of all telephone customers, is confidential, The Company will release such information to the Agency periodically for the update of their systems.

c. The E911 calling party, by dialing 911, waives the privacy afforded by non-listed and non-published service to the extent that the telephone number (“ANI”) and address (“ALI”) associated with the originating station location are furnished to the PSAP, on a call by call basis, after an E911 call has been received,

d. Service boundaries of the Company and political subdivision boundaries may not coincide. In the event that the Agency does not subscribe to Selective Routing, it must make arrangements to handle all 911 calls that originate from telephones served by Central offices in the local service areas (i.e., exchange) whether or not the calling telephone is situated on property within the geographical boundaries of the Agency’s public safety jurisdiction.

2.14.2.2 Conditions of Furnishing Services

2.14.2.2.a The Company’s entire liability to the Customer or any person for interruption or failure of 9-1-1 service shall be limited by the terms set forth in this section**.** This 9-1-1 service is offered solely for the use of the Customer or to assist the Customer in providing 9-1-1 emergency service in conjunction with applicable fire, police and other public safety agencies. By providing this service to the Customer, the Company does not create any relationship or obligation, direct or indirect, to any third party other than the Customer. C C

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

2.14.1.2.b The Company shall not be liable for civil damages, whether in contract, tort or otherwise, to any person, corporation, or other entity for any loss or damage caused by any Company act or omission in the design, development, installation, maintenance or provision of 9-1-1 service other than an act or omission constituting gross negligence or wanton or willful misconduct. However, in no event shall the Company's liability to any person, corporation, or other entity for any loss or damage exceed an amount equal to the prorated allowance of the tariff rate for the service or facilities provided to the Customer for the time such interruption to service or facilities continues, after notice by the customer to the Company. No allowance shall be made if the interruption is due to the negligence or willful act of the Customer.

2.14.1.2.c The Customer shall indemnify, defend and hold harmless the Company from any damages, or other injuries which may be asserted by any person, business, governmental agency, or other entity against the Company or Customer or any of their employees, directors, officers, or agents except for Company acts of gross negligence or willful or wanton misconduct, in connection with developing, adopting, implementing, maintaining, or operating the 9-1-1 system or for releasing subscriber information in connection with the provision of the 9-1-1 service. The Company accepts no responsibility for obtaining subscriber record information from private telecommunications systems.

2.14.1.2.d The Company shall not be liable or responsible for any indirect, incidental, or consequential damages associated with the provision of 9-1-1 service, including, by way of example and without limitation, when a failure or interruption of 9-1-1 service is due to the attachment of any equipment by a Customer to Company facilities. The Company shall not be liable for any civil damages caused by an act or omission of the Company in good faith release of information not in the public record, including non-published subscriber information, to emergency service providers responding to calls placed to a 9-1-1 service or host providers using such information to provide a 9-1-1 service.

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

C

C

The Company is not responsible for any infringement or invasion of the right of privacy of any person or persons, caused, or claimed to have been caused, directly or indirectly, by the installation, operation, failure to operate, maintenance, removal, presence, condition, occasion or use of the 911 service features and the equipment associated therewith, including, but not limited to, the identification of the telephone number, address or name associated with the telephone used by the party or parties accessing the 911 service.

2.14.3 911 Protocol Guidelines

2.14.3.1 Glossary of Terms

Host Telephone Company: The Service provider, which is also the telecommunications public utility that provides 9-1-1 service to the county/municipality, and that houses the Automatic Location Identification (ALI)/MSAG data used for providing 9-1-1 service.

Telephone Company: A telecommunications public utility regulated by the Pennsylvania Public Utility Commission and which has or requests access to the county/municipality 9-1-1 system or connection to the serving selective router, including, but not limited to, local exchange carriers and competitive local exchange carriers. This term is synonymous with ‘service provider’.

Content: The data elements of the MSAG including (but not necessarily limited to) the data elements that are entered into the following fields A-I of a standard MSAG record:

A. Tax area record
B. Locality
C. Street
D. Thoroughfare
E. Directional [where required]
F. Even (E), odd (O), or all (A) [applied to house numbers]
G. Low-high range of house numbers
H. PSAP (Public Safety Answering Point)
I. LAT/LONG (Latitude/Longitude) [where required]

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

C

Formatting, Format: Shall include changes to the identity of fields, order of fields, and number and arrangement of data elements in each field, and a telephone company's rearrangement or regrouping of such data, without changing the MSAG content, for purposes of validating against MSAG records.

2.14.3.2 Regulations

A. The Telephone Company will comply with the Protocols as set forth in, and in the form of, Service Provider E-9-1-1 Protocols, Service Provider E-9-1-1 Questionnaire and Testing Procedures in accordance with the Petition of Bell Atlantic-Pennsylvania, Inc. for a Declaratory Order (MSAG); Docket No. P-00971203; Settlement Agreement of all Parties and Joint Petition entered August 7, 1998.

B. The Telephone Company is indemnified under the Public Safety Emergency Telephone Act, Act 78 of 1990.

C. The Telephone Company's liability and insurance provisions are fully stated in Pa. P.U.C. No. 3, Section 2.6.

D. Cases of Service interruptions affecting public health and safety shall receive priority attention under any and all conditions, particularly in time of disaster. Every appropriate resource will be utilized. The service provider will make reasonable best efforts to have its system fully functional as soon as possible, unless conditions beyond the service provider's control prevent service restoration.

E. The service provider will not use the county's/municipality's MSAG for any purpose that is not directly related to and required for the provision of 9-1-1 service.

F. The Host Telephone Company will install the county's/municipality's MSAG in 'read/write' format and will not modify the content of MSAG unless requested or permitted to do so by the county/municipality. A request to modify content by the Host Telephone Company shall be responded to by the county/municipality within (10) business days or the request is deemed to be approved. The request shall be in writing and shall set forth in reasonable detail the proposed modification and all reasons in support. The request shall be granted provided the modification is necessary for the Host Telephone Company's provision, maintenance, and upgrading of the 9-1-1 service.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

C

G. The Telephone Company shall not otherwise modify the content of the MSAG, but may make formatting changes approved by the county/municipality shall respond to the request in ten (10) business days or the request is deemed to be approved. The request shall be granted provided the formatting change does not impair the integrity and accuracy of the MSAG database. For the purposes of this regulation, a content or formatting change does not include the use of the MSAG content in telephone companies' operational support systems to validate customer information for input to the ALI database.

H. The service provider will not sell, lease, rent, loan or provide, or transfer the county's/municipality's MSAG to any other person(s) or entity(ies) without the express written authorization of the county's/municipality's 9-1-1 coordinator, or his or her designee.

I. The Telephone Company will not, without the written consent of the county/municipality, modify or create any derivative of the county's/municipality's MSAG, except as follows: one(1) mirror image copy of the MSAG may be made in electronic form for archival purposes (the copy may be made in read/write format by the host telephone company, but shall be made solely in read-only format by all other telephone companies), and the telephone company may make a mirror image copy, solely in read-only format and only for database reconciliation, address verification for new connections of service, and other functions that are necessary to ensure that the name and address information provided by the service provider to the county/municipality is accurate and conforms to the county's/municipality's MSAG format.

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D) C

2.15 Operator Service Requirements

2.15.1 Company provided intrastate operator assisted communications services will observe the following requirements:

2.15.1.1 Identify itself at the time the end-user accesses its service.

2.15.1.2 Upon request, quote all rates and charges for its services to the end-user accessing its system

2.15.1.3 Arrange to have posted in plain view at each telephone location which automatically accesses the Company's operator service network and where its services are made available to the public or transient end-users:

2.15.1.3.1 the Company's operator service name and address;

2.15.1.3.2 bill and service dispute calling information including the operator service provider's dispute resolution phone number;

2.15.1.3.3 clear and specific instructions informing the end-user how to access a local exchange telephone company operator as an alternative available to the end-user; and

2.15.1.3.4 notice concerning any and all amounts to be billed by the Company's operator services on behalf of any host location or third party which will appear on the operator service provider's bill for services rendered.

2.15.1.4 In instances when the Company is unable to complete the call and it requires transfer to another telephone corporation which may affect the rates and charges applicable to the telephone bill, inform the caller of the transfer and its possible effect on the applicable rates and charges, before any charges are incurred.

2.15.1.5 In the case of such transfer, the telephone corporation or provider to which the call is transferred shall identify itself and inform the caller of the transfer's effect on the applicable rates and charges, before any charges are incurred.

2.15.2 The Company will comply with the following provisions:

2.15.2.1 Providers of intrastate operator assisted communications services shall not take any action or enter into any arrangement which restricts end-users selection among competing interexchange telephone corporations or end users access to competing providers of intrastate operator assisted communications services, or pay any commissions or other compensation to any entity engaged in such action or arrangement.

SECTION 3 - OBLIGATIONS OF THE CUSTOMER

3.1 General

The Customer shall be responsible for:

3.1.1 the payment of all applicable charges pursuant to the tariffs of the Company;

3.1.2 damage to or loss of the Company's facilities or equipment caused by the acts or omissions of the Customer or of any User; or by the noncompliance by the Customer or any User with these regulations; or by fire or theft or other casualty on the Customer's or any User's Premises, unless caused by the negligence or willful misconduct of the employees or agents of the Company;

3.1.3 providing at no charge, as specified from time to time by the Company, any needed personnel, equipment space and power to operate the Company facilities and equipment installed on the premises of the Customer or any User; and the level of heating and air conditioning necessary to maintain the proper operating environment on such premises;

3.1.4 any and all costs associated with obtaining and maintaining of the rights-of-way from the point of entry at the Customer's location to the termination point where service is finally delivered to the Customer, including, but not limited to, the costs of installing conduit or of altering the structure to permit installation of Company provided facilities. The Customer's use of such rights-of-way shall in all respects be subject to the terms, conditions and restrictions of such rights-of-way and of agreements between the Company and such third parties relating thereto, including without limitation, the duration applicable to and the condemnation of such rights-of-way, and shall not be in violation of any applicable governmental ordinance, law, rule, regulation or restriction. Where applicable, the Customer agrees that it shall assist the Company in the procurement and maintenance of such right-of-way. The Company may require the Customer to demonstrate its compliance with this section prior to accepting an order for service;

3.1.5 providing a safe place to work and complying with all laws and regulations regarding the working conditions on the premises at which the Company's employees and agents shall be installing or maintaining the Company's facilities and equipment. The Customer may be required to install and maintain the Company's facilities and equipment within a hazardous area if, in the Company's opinion, injury or damage to the Company's employees or property might result from installation or maintenance by the Company;

3.1.6 the Customer shall be responsible for identifying, monitoring, removing and disposing of any hazardous material (e.g. friable asbestos) prior to any construction or installation work;

SECTION 3 - OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.1.7 complying with all laws and regulations applicable to, and obtaining all consents, approvals, licenses and permits as may be required with respect to, the location of the Company's facilities and equipment in any Customer or User premises or the rights-of-way for which Customer is responsible under section 3.1.4; and granting or obtaining permission for the Company's agents or employees to enter the premises of the Customer or any User at any time for the purpose of installing, inspecting, maintaining, repairing, or upon termination of service as stated herein, removing the facilities or equipment of the Company;

3.1.8 not creating or allowing to be placed any liens or other encumbrances on the Company's equipment or facilities; and

3.1.9 making the Company's facilities and equipment available periodically for maintenance purposes at a time agreeable to both the Company and the Customer. No allowance will be made for the period during which service is interrupted for such purposes.

3.2 Prohibited Uses

3.2.1 The services the Company offers shall not be used for any unlawful purpose or for any use as to which the Customer has not obtained all governmental approvals, authorizations, licenses, consents and permits required to be obtained by the Customer with respect thereto.

3.2.2 The Company may require applicants for service who intend to use the Company's offerings for resale and/or for shared use to file a letter with the Company confirming that their use of the Company's offerings complies with relevant laws and Commission regulations, policies, orders, and decisions.

3.2.3 The Company may, without obtaining any further consent from the Customer, assign any rights, privileges, or obligations under this tariff. The Customer shall not, without prior written consent of the Company, assign, transfer, or in any other manner dispose of, any of its rights, privileges, or obligations under this tariff, and any attempt to make such an assignment, transfer, disposition without such consent shall be null and void.

3.2.4 The Company may require a Customer to immediately shut down its transmission of signals if said transmission is causing interference to others.

3.2.5 A Customer may not use the services so as to interfere with or impair service over any facilities and associated equipment, or so as to impair the privacy of any communications over such facilities and associated equipment.

SECTION 3 - OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.2.6 Customer use of any resold service obtained from other service providers shall also be subject to any applicable restrictions imposed by the underlying providers.

3.2.7 A Customer, Joint User, or Authorized User shall not represent that its services are provided by the Company, or otherwise indicate to its Customers that its provision of services is jointly with the Company, without the written consent of the Company. The relationship between the Company and Customer shall not be that of partners or agents for one or the other, and shall not be deemed to constitute a partnership or agency agreement.

3.3 Claims

With respect to any service or facility provided by the Company, Customer shall indemnify, defend and hold harmless the Company from and against all claims, actions, damages, liabilities, costs and expenses, including reasonable attorneys' fees for:

3.3.1 any loss, destruction or damage to property of the Company or any third party, or the death or injury to persons, including, but not limited to, employees or invitees of either party, to the extent caused by or resulting from the negligent or intentional act or omission of the Customer or User or their employees, agents, representatives or invitees;

3.3.2 any claim, loss, damage, expense or liability for infringement of any copyright, patent, trade secret, or any proprietary or intellectual property right of any third party, arising from any act or omission by the Customer or User, including, without limitation, use of the Company's services and facilities in a manner not contemplated by the agreement between Customer and the Company; or

3.3.3 any claim of any nature whatsoever brought by a User with respect to any matter for which the Company would not be directly liable to the Customer under the terms of the applicable Company tariff.

SECTION 4 - PAYMENT ARRANGEMENTS

4.1 Payment for Service

The Customer is responsible for the payment of all charges for facilities and services furnished by the Company to the Customer and to all Users authorized by the Customer, regardless of whether those services are used by the Customer itself or are resold or shared with other persons.

4.2 Billing and Collection of Charges

4.2.1 Nonrecurring charges are due and payable within 30 days after the date an invoice is mailed to the Customer by the Company.

4.2.2 Customers will only be charged once, on either an interstate or intrastate basis, for any nonrecurring or optional features.

4.2.3 The Company shall present invoices for Recurring Charges monthly to the Customer, in advance of the month in which service is provided, and Recurring Charges shall be due and payable within 30 days after the invoice is mailed.

4.2.4 Charges based on measured usage will be included on the next invoice rendered following the end of the month in which the usage occurs, and will be due and payable within 30 days after the invoice is mailed.

4.2.5 When service does not begin on the first day of the month, or end on the last day of the month, the charge for the fraction of the month in which service was furnished will be calculated on a pro rata basis. For this purpose, every month is considered to have 30 days.

4.2.6 Billing of the Customer by the Company will begin on the Service Commencement Date, which is the first day following the date on which the Company notifies the Customer that the service or facility is available for use, except that the Service Commencement Date may be postponed by mutual agreement of the parties, or if the service or facility does not conform to standards set forth in the tariffs of the Company or the Service Order. Billing accrues through and includes the day that the service, circuit, arrangement or component is discontinued.

4.2.7 With respect to Business Customers only, if any portion of the payment is received by the Company after the date due, or if any portion of the payment is received by the Company

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

in funds which are not immediately available, then a late payment penalty shall be due to the Company. The late payment penalty shall be the portion of the payment not received by the date due, net of local taxes, not compounded, multiplied by a monthly late factor of 1.5%.

4.2.8 For any check returned to the Company due to insufficient funds, uncollected funds, or closed account, Customer will be assessed a $25.00 fee per check returned.

4.3 Advance Payments

4.3.1 To safeguard its interests, the Company may require a Business Customer to make an advance payment before services and facilities are furnished. The advance payment will not exceed an amount equal to the nonrecurring charge(s) and the first month's estimated recurring charges for the service or facility. In addition, where special construction is involved, the advance payment may also include an amount equal to the estimated nonrecurring charges for the special construction and recurring charges (if any) for a period to be set between the Company and the Customer. The advance payment will be credited to the Customer's initial bill and may be required in addition to a deposit.

4.3.2 A Customer whose service has been discontinued for nonpayment of bills will be required to pay the unpaid balance due carrier and may be required to pay reconnect charges.

4.4 Deposits

4.4.1 The Company may, in order to safeguard its interests, require an applicant to make a suitable deposit to be held by the Company as a guarantee of the payment of charges.

4.4.2 A deposit will be required under the following conditions:

4.4.2.1 Applicant does not have verifiable credit with any Level 3 Communications, LLC affiliate anywhere within the region in the same of similar business; or

4.4.2.2 Applicant has had previous verifiable Service with any Level 3 Communications, LLC affiliate anywhere within the region but has an outstanding and unpaid bill for Service; or has not established satisfactory credit. Satisfactory credit for an Service Customer is defined as twelve consecutive months of service without a suspension of service for nonpayment or with no more than one notification of intent to suspend service for nonpayment.

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.4.2.3 Applicant for nonresidential service will be given credit for previous nonresidential service only if the applicant is same business entity to which such service was previously provided.

4.4.3 An initial deposit or an additional deposit will be required of an existing Customer when high risk is indicated and existing security is insufficient. Such requirement will be imposed when a payment history includes a suspension of service for nonpayment during the previous twelve month period.

4.4.4 The Company reserves the right to provide for installment payment of the deposit if the circumstances warrant.

4.4.5 Any deposit required of an existing Customer is due and payable within ten days after the requirement is imposed. This requirement shall be in writing and the payment date shall be on or after the due and payable date for the current bill. If said deposit or installment thereof, as appropriate, is not paid within the aforementioned time frame, the Company may suspend service of the Customer without further notice. The following are exceptions to this provision:

4.4.5.1 In the event service is suspended for a Customer for nonpayment, an initial or additional deposit shall be required prior to the restoration of service if existing security is insufficient.

4.4.5.2 In the event prior indebtedness or prior unsatisfactory credit has been determined subsequent to the initial establishment of service due to misrepresentation of the facts by the Customer, a deposit shall be due and payable within five days upon verbal notification and written confirmation or within ten days when notification can only be provided in writing. The ten day period shall be measured from the mailed date of the written notice. If said deposit is not paid within the aforementioned time frame, the Company may suspend service to the Customer without further notice.

4.4.6 The amount of the deposit shall be the estimated charges for the Service which will accrue for a 2-month period. All applicants and existing Customers shall be treated uniformly for the determination and application of deposits.

4.4.7 When it is determined that a deposit is required under the conditions specified above, the applicant or Customer may, in lieu of or in addition to making the deposit, arrange for an acceptable third party to guarantee payment of his charges by executing on his behalf a Guarantee of Payment Agreement with the Company. An acceptable third party guarantor for Service is a current non-residential Customer with at least two years continuous service, whose payment history for the most recent twelve month period is satisfactory.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.4.8 The fact that a deposit has been made in no way relieves the Customer from complying with the Company's regulations as to advance payments, or the prompt payment of bills on presentation.

4.4.9 The deposit will bear simple interest computed from the date of its receipt by the Company to the date the deposit is refunded, or service is terminated, or annually upon request of the Customer.

4.4.10 Simple interest shall be credited or paid to the Customer while the Company holds the deposit. The interest rate shall be specified by the Pennsylvania Public Utility Commission.

4.4.11 When service is terminated, the amount of the initial or additional deposit, with any interest due, will be credited to the Customer's account and any credit balance which may remain will be refunded. After an existing Customer has established satisfactory credit, the amount of the deposit, with any interest due, will be either credited to the account or at the option of the Customer, refunded. Satisfactory credit for a Customer is defined as twelve consecutive months of Service without suspension for nonpayment and with no more than one notification of intent to suspend service for nonpayment.

4.5 Discontinuance of Service

4.5.1 Upon nonpayment of any amounts owing to the Company, the Company may, by giving five (5) days prior written notice to the Customer and by making reasonable efforts to contact Customer at least 24 hours in advance, discontinue or suspend service without incurring any liability.

4.5.2 Upon violation of any of the other material terms or conditions for furnishing service the Company may, by giving five (5) days prior notice in writing to the Customer, discontinue or suspend service without incurring any liability if such violation continues during that period.

4.5.3 Upon condemnation of any material portion of the facilities used by the Company to provide service to a Customer, or if a condition immediately dangerous or hazardous to life, physical safety or property exists, or if a casualty renders all or any material portion of such facilities inoperable beyond feasible repair, the Company, by notice to the Customer, may discontinue or suspend service without incurring any liability.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.5.4 Upon the Customer's insolvency, assignment for the benefit of creditors, filing for bankruptcy or reorganization, or failing to discharge an involuntary petition within the time permitted by law, the Company may immediately require a deposit without incurring any liability.

4.5.5 Upon any governmental prohibition or required alteration of the services to be provided or any violation of an applicable law or regulation, the Company may immediately discontinue service without incurring any liability.

4.5.6 Upon the Company's discontinuance of service to the Customer, the Company, in addition to all other remedies that may be available to the Company at law or in equity or under any other provision of the tariffs of the Company, may declare all future monthly and other charges which would have been payable by the Customer during, the remainder of the minimum term for which such services would have otherwise been provided to the Customer to be immediately due and payable (discounted to present value at six percent (6%)).

4.6 Cancellation of Application for Service

4.6.1 Applications for service are noncancellable unless the Company otherwise agrees. Where the Company permits the Customer to cancel an application for service prior to the start of service or prior to any special construction, no charges will be imposed except for those specified below.

4.6.2 Where, prior to cancellation by the Customer, the Company incurs any expenses in installing the service or in preparing to install the service that it otherwise would not have incurred, a charge equal to the costs the Company incurred, less net salvage, shall apply, but in no case shall this charge exceed the sum of the charge for the minimum period of services ordered, including installation charges, and all charges others levy against the Company that would have been chargeable to the Customer had service begun (all discounted to present value at six percent (6%)).

4.6.3 Where the Company incurs any expense in connection with special construction, or where special arrangements of facilities or equipment have begun, before the Company receives a cancellation notice, a charge equal to the costs incurred, less net salvage, applies. In such cases, the charge will be based on such elements as the cost of the equipment, facilities, and material, the cost of installation, engineering, labor, and supervision, general and administrative expense, other disbursements, depreciation, maintenance, taxes, provision for return on investment, and any other costs associated with the special construction or arrangements.

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.6.4 The special charges described above will be calculated and applied on a case-by-case basis.

4.7 Changes in Service Requested

If the Customer makes or requests material changes in circuit engineering, equipment specifications, service parameters, premises locations, or otherwise materially modifies any provision of the application for service, the Customer's installation fee shall be adjusted accordingly.

4.8 Taxes

The Customer is responsible for the payment of Federal excise taxes, gross receipts, access, state and local sales and use taxes and all taxes, fees, surcharges (however designated) and other exactions imposed on the Company or its services by governmental jurisdictions, other than taxes imposed generally on corporations. Any taxes imposed by a local jurisdiction (e.g. county and municipal taxes) will only be recovered from those customers residing in the affected jurisdictions. All such taxes, fees, and charges shall be separately designated on the Company's invoices, and are not included in the tariffed rates. All surcharges or fees other than taxes will be filed for Commission approval. It should be the responsibility of the Customer to pay any such taxes that subsequently become applicable retroactively.

4.9 Disputed Bills

The Customer may dispute a bill only by written notice to the Company. Unless such notice is received in a timely fashion, the bill statement shall be deemed to be correct and payable in full by Customer. If Customer and Company are unable to resolve the dispute to their mutual satisfaction, Customer may file a complaint with the Pennsylvania Public Utility Commission, Bureau of Consumer Services in accordance with the Commission’s rules of procedure. The address for the Bureau of Consumer Services is:

P.O. Box 3265
231 State Street, Barto Building
Harrisburg, PA 17101

SECTION 5 - USE OF CUSTOMER'S SERVICE BY OTHERS

5.1 Resale and Sharing

Any service provided under the Company tariffs may be resold to or shared with other persons at the option of Customer, except as provided in Section 5.3, following. Customer remains solely responsible for all use of services ordered by it or billed to its telephone number(s) pursuant to the tariffs of the Company, for determining who is authorized to use its services, and for notifying the Company of any unauthorized use. Business rates apply to all service that is resold or shared.

5.2 Joint Use Arrangements

Joint use arrangements will be permitted for all services available for resale and sharing pursuant to the Company tariffs. From each joint use arrangement, one member will be designated as the Customer responsible for the manner in which the joint use of the service will be allocated. Level 3 Communications, LLC will accept orders to start, rearrange, relocate, or discontinue service only from the Customer. Without affecting the Customer's ultimate responsibility for payment of all charges for the service, each Joint User shall be responsible for the payment of the charges billed to it.

5.3 Transfers and Assignments

5.3.1 Neither the Company nor the Customer may assign or transfer its rights or duties in connection with the services and facilities provided by the Company without the written consent of the other party and any appropriate authorizations, if necessary, except that the Company may assign its rights and duties (a) to any subsidiary, parent company or affiliate of the Company, (b) pursuant to any sale or transfer of substantially all the assets of the Company; or (c) pursuant to any financing, merger or reorganization of the Company.

5.3.2 If a Customer cancels a Service Order or terminates services before the completion of the term for any reason whatsoever other than a Major Service Interruption, Customer agrees to pay to the Company the following sums, within 21 days of the effective date of the cancellation or termination and be payable under the terms set forth in Section 4.6, preceding: all costs, fees and expenses reasonably incurred in connection with:

5.3.2.1 All Nonrecurring charges as specified in the Company's tariffs, plus

SECTION 5 - USE OF CUSTOMER'S SERVICE BY OTHERS (CONT'D)

5.3.2.2 Any disconnection, early cancellation or termination charges reasonably incurred and paid to third parties by the Company on behalf of Customer, plus

5.3.2.3 All Recurring Charges specified in the applicable Company tariff for the balance of the then current term.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 6 - CANCELLATION OF SERVICE

Reserved for future use.

Issued: September 7, 2000
Effective: September 8, 2000

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 7 - NOTICES AND COMMUNICATIONS

7.1 The Customer shall designate on the Service Order an address to which the Company shall mail or deliver all notices and other communications, except that Customer may also designate a separate address to which the Company's bills for service shall be mailed.

7.2 The Company shall designate on the Service Order an address to which the Customer shall mail or deliver all notices and other communications, except that the Company may designate a separate address on each bill for service to which the Customer shall mail payment on that bill.

7.3 All notices or other communications required to be given pursuant to the tariffs of the Company will be in writing. Notices and other communications of either party, and all bills mailed by the Company, shall be presumed to have been delivered to the other party on the third business day following placement of the notice, communication or bill with the U.S. Mail or a private delivery service, prepaid and properly addressed, or when actually received or refused by the addressee, whichever occurs first.

7.4 The Company or the Customer shall advise the other party of any changes to the addresses designated for notices, other communications or billing, by following the procedures for giving notice set forth herein.

SECTION 8 - CUSTOMER EQUIPMENT AND CHANNELS

8.1 General

A User may transmit or receive information or signals via the facilities of the Company. The Company's services are designed primarily for the transmission of voice-grade telephonic signals, except as otherwise stated in the tariffs of the Company. A User may transmit any form of signal that is compatible with the Company's equipment, but except as otherwise specifically stated in its tariffs, the Company does not guarantee that its services will be suitable for purposes other than voice-grade telephonic communication.

8.2 Station Equipment

8.2.1 Terminal equipment on the User's Premises and the electric power consumed by such equipment shall be provided by and maintained at the expense of the User. The User is responsible for the provision of wiring or cable to connect its terminal equipment to the Company's Point of Connection.

8.2.2 The Customer is responsible for ensuring that Customer-provided equipment connected to the Company equipment and facilities is compatible with such equipment and facilities. The magnitude and character of the voltages and currents impressed on Company-provided equipment and wiring by the connection, operation, or maintenance of such equipment and wiring shall be such as not to cause damage to Company-provided equipment and wiring or injury to the Company's employees or to other persons. Any additional protective equipment required to prevent such damage or injury shall be provided by the Company at the Customer's expense.

8.2.3 Customer provided station equipment may be attached to services provided under the tariffs of the Company subject to Part 68 of the FCC Rules and to any applicable provisions of the tariffs of the Company and is the sole responsibility of the Customer.

8.2.4 The Company is not responsible for malfunctions of Customer-owned telephone sets or other Customer-provided equipment, or for misdirected calls, disconnects or other service problems caused by the use of Customer-owned equipment.

8.3 Interconnection of Facilities

8.3.1 Any special interface equipment necessary to achieve compatibility between the facilities and equipment of the Company used for furnishing Communications Services and the channels, facilities, or equipment of others shall be provided at the Customer's expense.

8.3.2 Communications Services may be connected to the services or facilities of other communications carriers only when authorized by, and in accordance with, the terms and conditions of the tariffs of the other communications carriers which are applicable to such connections.

8.3.3 Facilities furnished under the tariffs of the Company may be connected to Customer provided terminal equipment in accordance with the provisions of the tariffs of the Company. All such terminal equipment shall be registered by the Federal Communications Commission pursuant to Part 68 of Title 47, Code of Federal Regulations; and all User provided wiring shall be installed and maintained in compliance with those regulations.

8.4 Tests and Adjustments

Upon suitable notice, the Company may make such tests, adjustments, and inspections as may be necessary to maintain the Company's facilities in satisfactory operating condition. No interruption allowance will be credited to the Customer for the period during which the Company makes such tests, adjustments, or inspections.

8.5 Inspections

8.5.1 Upon suitable notification to the Customer, and at a reasonable time, the Company may make such tests and inspections as may be necessary to determine that the User is complying with all requirements referenced herein for the installation, operation, and maintenance of Customer-provided facilities, equipment, and wiring in the connection of Customer-provided facilities and equipment to Company-owned facilities and equipment.

8.5.2 If the protective requirements for Customer-provided equipment are not being complied with, the Company may take such action as it deems necessary to protect its facilities, equipment, and personnel. The Company will notify the Customer promptly if there is any need for further corrective action. Within ten days of receiving this notice, the Customer must take this corrective action and notify the Company of the action taken. If the Customer fails to do this, the Company may take whatever additional action is deemed necessary, including the suspension of service, to protect its facilities, equipment and personnel from harm.

SECTION 9 - ALLOWANCES FOR INTERRUPTIONS IN SERVICE

9.1 General

9.1.1 Interruptions in service, which are not due to the negligence of, or noncompliance with the provisions of the tariffs of the Company by, the Customer or of an authorized or Joint User, or the operation or malfunction of the facilities, power or equipment provided by the Customer, will be credited to the Customer as set forth below for the part of the service that the interruption affects.

9.1.2 A credit allowance will be made when an interruption occurs because of a failure of any component furnished by the Company under its tariffs. An interruption period begins when the Customer reports a service, facility or circuit is interrupted and releases it for testing and repair. An interruption period ends when the service, facility or circuit is operative. If the Customer reports a service, facility or circuit to be inoperative but declines to release it for testing and repair, it is considered to be impaired, but not interrupted.

9.1.3 For calculating credit allowances, every month is considered to have 30 days. A credit allowance is applied on a pro rata basis against the rates specified hereunder and is dependent upon the length of the interruption. Only those facilities on the interrupted portion of the circuit will receive a credit.

9.1.4 A credit allowance will be given for interruptions of 30 minutes or more. Credit allowances shall be calculated as follows:

9.2 Interruptions of Less Than 24 Hours

9.2.1

Length of Service Interruption	Credit
-Less than 1 hour	None
-1 hour up to but not including 8 hours	1/4 of day
-8 hours up to but not including 12 hours	1/2 of day
-12 hours up to but not including 16 hours	3/4 of day
-16 hours up to but not including 24 hours	one day

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

SECTION 9 - ALLOWANCES FOR INTERRUPTIONS IN SERVICE (CONT'D)

9.3 Two or More Service Interruptions

Two or more service interruptions of the same type to the same line/equipment of two (2) hours or more during any one twenty-four (24) hour period shall be considered as one interruption. In no event shall such interruption credits for any one line/equipment exceed one (1) day's fixed recurring charges for such line/equipment in any twenty-four (24) hour period.

9.4 Interruptions Over 24 Hours

Interruptions over 24 hours will be credited 1/24 day for each 1-hour period or fraction thereof up to a maximum of 8 hours. Interruptions in excess of 8 hours will be credited as one day. No more than one full day's credit will be allowed for any period of 24 hours.

9.5 No credit allowance will be made for:

9.5.1 interruptions due to the negligence of, or noncompliance with the provisions of the tariffs of the Company by, the Customer, User, or other common carrier providing service connected to the service of the Company;

9.5.2 interruptions due to the negligence of any person other than the Company, including but not limited to the Customer or other common carriers connected to the Company's facilities;

9.5.3 interruptions of service due to the failure or malfunction of facilities, power or equipment provided by the Customer, Authorized User, Joint User, or other common carrier providing service connected to the services or facilities of the Company;

9.5.4 interruptions of service during any period in which the Company is not given full and free access to its facilities and equipment for the purpose of investigating and correcting interruptions;

9.5.5 interruptions of service during a period in which the Customer continues to use the service on an impaired basis;

9.5.6 interruptions of service during any period when the Customer has released service to the Company for maintenance purposes or for implementation of a Customer order for a change in service arrangements;

9.5.7 interruption of service due to circumstances or causes beyond the control of the Company; and

SECTION 9 - ALLOWANCES FOR INTERRUPTIONS IN SERVICE (CONT'D)

9.5.8 interruptions of service that occur or continue due to the Customer's failure to authorize replacement of any element of special construction.

SECTION 10 - EXCHANGE ACCESS SERVICE

10.1 General

Exchange Access Service provides a business Customer with a telephonic connection and a unique telephone number address on the public switched telecommunications network. Each Exchange Access Service enables users to:

10.1.1 receive calls from other stations on the public switched telecommunications network;

10.1.2 access other services offered by the Company as set forth in this tariff;

10.1.3 access certain interstate and international calling services provided by the Company;

10.1.4 access (at no additional charge) the Company's operators and business office for service related assistance;

10.1.5 access (at no additional charge) emergency services by dialing 0- or 9-1-1; and

10.1.6 access services provided by other common carriers which purchase the Company's Switched Access services as provided under the Company's Federal and State tariffs, or which maintain other types of traffic exchange arrangements with the Company.

10.1.7 Exchange Access Service cannot be used to originate calls to other telephone companies' caller-paid information services (e.g., NPA 900, NXX 970, 540, etc.). Calls to those numbers and other numbers used for caller-paid information services will be blocked. Calls to numbers "NXX 976" will also be blocked unless otherwise specified by the Customer at the time service is ordered. Should a Customer request unblocking for access to the "NXX 976" caller-paid information service, the Company will bill and collect on behalf of the telephone companies' information provider holding the Customer fully liable for all charges incurred for use of the information provider's service.

Each Exchange Access Service is available on a "Full" service basis, whereby service is delivered to a demarcation/connection block at the Customer's premises.

The following Exchange Access Services are offered:

Direct Inward Dial Service C
Direct Inward Dial/Direct Outward Dial Service |

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

10.2 Exchange Access Service Areas

Exchange Access Services are provided (pursuant to Section 11.1) in the following limited geographic areas:

Exchanges in Which Full Service is Available[1] in Verizon Pennsylvania Territory C

Alquippa	Danville	Indiana
Allentown	Dawson	Kemblesville
Altoona	Donora	Kennett Square
Beaver Falls	Doylestown	Lancaster
Bedminster	Easton	Lansdale
Belle Vernon	Elizabeth	Lebanon
Bethlehem	Exton	Ligonier
Blairsville	Fayette City	Mechanicsburg
Bloomsburg	Finleyville	Mercer
Canonsburg	Greensburg	Midland
Chester Springs	Greenville	Millersville
Coatesville	Grove City	Monessen
Collegeville	Harrisburg City, Zone 1	Mount Gretna
Curwensville	Imperial	New Castle

C
C
C

[1] Full service versions of Company’s Exchange Access Services will be provided to Customers, at Customer premises located in these areas pursuant to this or the Verizon-Pennsylvania tariff, to the extent that: (a) Company has in place and available network facilities extending to such premises; or (b) Customer’s premises is served by a Verizon-Pennsylvania wire center at which the Company maintains a colocation agreement and is able to reasonably employ such arrangement to interconnect to unbundled exchange link facilities which Company, in its sole discretion, judges to be of a type, grade, technical specification, quality and quantity sufficient to, and offered under conditions consistent with, the delivery of such services.

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchanges in Which Full Service is Available in Verizon Pennsylvania Territory (cont'd)

Parkesburg	Scranton	Uniontown
Perryopolis	Sharon	West Chester
Philadelphia	Shenandoah	Washington
Pittsburgh	Souderton	Wilkes-Barre
Pottstown	State College	Williamsport
Pottsville	Stroudsburg	Yardley
Reading	Tamaqua	Zelienople
Rochester	Tarentum	
Scottdale		

Exchanges in Which Full Service is Available in Verizon North Territory:

Boswell	Hershey	Pleasantville
Brookside	Johnstown	Princeton
Confluence	Meyersdale	Selinsgrove
Erie	Middleburg	Somerset
Glen Rock	New Bedford	Titusville
Grand Valley	New Wilmington	York

Exchanges in Which Full Service is Available in United Telephone Company of PA Territory:

Biglerville	Chambersburg	New Oxford
Butler	Hanover	
Carlisle	Marion	

Exchanges in Which Full Service is Available in Commonwealth Telephone Company:
Springville-Susquehanna

Exchanges in Which Full Service is Available in Frontier Communications of Breezewood Territory [C]

Breezewood	New Granada
Needmore	Warfordsburg

Exchanges in Which Full Service is Available in Frontier Communications of Lakewood Territory

Lakewood	Mahanoy City	Tamaqua

Exchanges in Which Full Service is Available in Palmerton Telephone Company Territory

Bowmanstown	Kunkletown
Kresgeville	Palmerton

Exchanges in Which Full Service is Available in Denver & Ephrata Telephone Company Territory

Adamstown	Denver	Lititz
Akron	Ephrata	Manheim

[C]

Issued By: William P. Hunt, III, Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchanges in Which Full Service is Available in Frontier Communications of Pennsylvania Territory

Intercourse	New Holland
Leola	Terre Hill

Exchanges in Which Full Service is Available in North Pittsburgh Telephone Company Territory

Cooperstown	Freeport	Saxonburg
Criders Corners	Gibsonia	Wexford
Curtisville	Mars	

Exchanges in Which Full Service is Available in Armstrong Telephone Company Territory

Clinton	Murdocksville

Exchanges in Which Full Service is Available in Buffalo Valley Telephone Company Territory

Lewisburg	Mifflinburg

Exchanges in Which Full Service is Available in Conestoga Telephone & Telegraph Company Territory

Bally	Green Hills	Sassamansville
Birdsboro	Morgantown	Topton
Boyertown	Oley	Yellow House
Douglassville		

Exchanges in Which Full Service is Available in Ironton Telephone Company Territory

Ironton

Exchanges in Which Full Service is Available in Laurel Highland Telephone Company Territory

Stahlstown	Indian Head

Exchanges in Which Full Service is Available in The North-Eastern Pennsylvania Telephone Company Territory

Thompson	Jackson	Forest City
Union Dale	New Milford	Pleasant Mount
Harford	Clifford	

Exchanges in Which Full Service is Available in Pymatuning Independent Telephone Company Territory

Transfer	Sharon
Greensville	Sharpsville

Exchanges in Which Full Service is Available in Armstrong Telephone Company North Territory

Duke Center

Issued By: William P. Hunt, III, Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchanges in Which Full Service is Available in Citizens Telephone Company of Kecksburg Territory
Kecksburg

Exchanges in Which Full Service is Available in Frontier Communications of Canton, LLC Territory
Canton Leroy

Exchanges in Which Full Service is Available in Citizens Telecom Company of New York Territory
Little Meadows Quaker Lake

Exchanges in Which Full Service is Available in Lackawaxen Telephone Company Territory
Rowland

Exchanges in Which Full Service is Available in North Penn Telephone Company Territory
Bentley Creek Millerton Roseville

Exchanges in Which Full Service is Available in South Canaan Telephone Company Territory [C]
South Canaan Waymart [C]

Issued By: General Counsel – Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

10.3 Calling Areas

Geographically-defined Local Calling Areas[2] are associated with each Exchange Access Service. Exchange Access Services shall have the following local calling areas:

C

Exchange	Local Calling Area
Alquippa	Alquippa, Ambridge, Baden, Glenwillard, Hookstown, Pittsburgh Zone 16, Rochester
Allentown	Allentown, Bath, Bethlehem, Catasaqua, Coopersburg, Easton, Emmaus, Hellertown, Kutztown, Nazareth, New Smithville, New Tripoli, Northampton, Riegelsville, Slatington, Springtown
Altoona	Altoona, Bellwood, Cresson, Hollidaysburg, Tyrone
Beaver Falls	Beaver Falls, Darlington, Ellwood City, Enon Valley, Hookstown, Midland, Rochester, Wampum, Zelienople
Bedminster	Bedminster, Carversville, Doylestown, Dublin, Ferndale, Perkasie, Plumsteadville, Quakertown

[2] Rates and rate plans for Local Calling Area calls placed over Company-provided Exchange Access Services are set forth in Section 11.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchange	Local Calling Area
Belle Vernon	Belle Vernon, California, Charleroi, Donora, Fayette City, Monessen, Monongahla, Perryopolis, West Newton
Bethlehem	Allentown, Bath, Bethlehem, Catasaqua, Coopersburg, Easton, Hellertown, Nazareth, Northampton, Riegelsville, Slatington, Springtown
Biglerville	Biglerville, Gettysburg, York Springs
Blairsville	Black Lick, Blairsville, Bolivar, Derry, Homer City, Indiana, Latrobe
Bloomsburg	Berwick, Bloomsburg, Catawissa, Danville, Millville, Numida, Orangeville, Washington
Boswell	Boswell, Johnstown, Hooversville, Somerset, Stoystown
Brookside	Brookside, Trout Run, Jersey Shore
Butler	Butler, Chicora, Connoquenessing, Meridan, Nixon, Prospect, West Sunbury
Canonsburg	Canonsburg, McDonald, McMurray, Pittsburgh Zone 13, Washington
Carlisle	Carlisle, Mount Holly Springs, Newville
Chambersburg	Chambersburg, Fayetteville, Marion
Chester Springs	Chester Springs, Eagle, Exton, Philadelphia Zone 28, Phoenixville, Pughtown, Royersford
Coatesville	Avondale, Coatesville, Dowington, Eagle, Exton, Glenmoore, Honeybrook, Kennett Square, Lenape, Mortonville, Parkesburg, Unionville, West Grove, West Chester, Westtown
Collegeville	Center Point, Collegeville, Green Lane, Harleysville, Lansdale, North Wales, Philadelphia Zone 29, 30 and 31, Phoenixville, Pottstown, Royersford, Schwenksville, Souderton

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchange	Local Calling Area
Confluence	Confluence, Rockwood, Salisbury
Curwensville	Clearfield, Curwensville, Mahaffey
Danville	Bloomsburg, Catawissa, Danville, Elysburg, Northumberland, Sunbury, Washingtonville
Dawson	Connellsville, Dawson, Perryopolis, Scottdale
Donora	Belle Vernon, Charleroi, Donora, Elizabeth, Monessen, Monogahela
Doylestown	Buckingham, Carversville, Doylestown, Dublin, Line Lexington, Philadelphia Zone 45, Plumsteadville, Wycombe
Easton	Allentown, Bethlehem, Bloomsbury, Catasaqua, Easton, Hellertown, Nazareth, Phillipsburg, Rieglsville, Springtown, Upper Black Eddy
Elizabeth	Clairton, Donora, Elizabeth, Monogahela, Pittsburgh Zone 10, Pittsburgh Zone 11
Erie	Edinboro, Erie, Fairview, Girad, McKean, North East, Waterford, Wattsburg
Exton	Chester Springs, Coatesville, Downington, Eagle, Exton, Glenmoore, Lenape, Mortonville, Philadelphia Zone 28, Pughtown, West Chester, Westtown
Fayette City	Belle Vernon, California, Charleroi, Fayette City, Monessen, Perryopolis
Finleyville	Finleyville, McMurray, Monogahela, Pittsburgh Zone 11 and 12
Glen Rock	Glen Rock, Jefferson, Loganville, Stewartstown, York
Grand Valley	Grand Valley, Pleasantville, Titusville, Youngville

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchange	Local Calling Area
Greensburg	Delmont, Greensburg, Herminie, Jeanette, Latrobe, New Alexandria, Youngwood
Greenville	Greenville, Sharpsville, Sheakleyville
Grove City	Blacktown, Grove City, Harrisville, Mercer, Wesley
Hanover	Hanover, Jefferson, Littlestown, New Oxford
Harrisburg City	Dauphin, Halifax, Harrisburg Zone 1 and Zone 2, Hershey, Hummelstown, Lewisberry, Marysville, Mechanicsburg, Middletown, Shellsville
Hershey	Annville, Elizabethtown, Harrisburg City Zone 1 and 2, Hershey, Hummelstown, Lebanon, Middletown, Palmyra, Shellsville
Imperial	Imperial, McDonald, Oakdale, Pittsburgh Zone 14 and 15
Indiana	Black Lick, Blairsville, Clymer, Elderton, Homer City, Indiana, Marion Center, Parkwood
Johnstown	Beaverdale, Davidsville, Johnstown, Nanty Glo, Seward, South Fork, Windber
Kemblesville	Avondale, Hockessin, Kemblesville, Kennett Square, Landenberg, Mendenhall, Newark, Oxford, Unionville, West Grove
Kennett Square	Avondale, Coatesville, Hockessin, Kemblesville, Kennett Square, Landenberg, Lenape, Mendenhall, Mortonville, Unionville, West Grove, West Chester, Westtown, Wilmington

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchange	Local Calling Area
Lancaster	Intercourse, Lancaster, Landisville, Leola, Lititz, Manheim, Millersville, Mount Joy, Mountville, New Holland, Quarryville, Rawlinsville, Strasburg
Lansdale	Center Point, Harleysville, Lansdale, Line Lexington, North Wales, Souderton
Lebanon	Annville, Frystown, Hershey, Jonestown, Lebanon, Mount Gretna, Myerstown, Palmyra, Schaefferstown
Ligonier	Latrobe, Ligonier
Marion	Chambersburg, Greencastle, Marion
Mechanicsburg	Dillsburg, Harrisburg Zone 1, Lewisberry, Mechanicsburg
Mercer	Blacktown, Fredonia, Grove City, Mercer, Sharon, Sharpsville, Wesley
Meyersdale	Berlin, Meyersdale, Rockwood, Salisbury, Sommerset
Middleburg	Beaver Spring, Middleburge, Mount Pleasant Mills, Selinsgrove
Midland	Beaver Falls, Hookstown, Midland, Rochester, Smiths Ferry
Millersville	Lancaster, Landisville, Millersville, Mountville, Strasburg
Monessen	Belle Vernon, Charleroi, Donora, Fayette City, Monessen, Monongahela
Mount Gretna	Annville, Lebanon, Mount Gretna, Palmyra
New Bedford	New Bedford, New Castle, New Wilmington

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchange	Local Calling Area
New Castle	Bessemer, Ellwood City, New Bedford, New Castle, New Wilmington, Plain Grove, Princeton, Volant, Wampum
New Oxford	East Berlin, Hanover, Littleton, New Oxford
New Wilmington	New Bedford, New Castle, New Wilmington, Sharon, Volant
Parkesburg	Atglen, Coatesville, Gap, Glenmoore, Honey Brook, Mortonville, Parkesburg, West Grove
Perryopolis	Belle Vernon, Dawson, Fayette City, Perryopolis, Uniontown
Philadelphia	Holly Oak, Lenape, Mendenhall, Westtown, Wilmington, Chester Springs, Dowington, Eagle, Exton, Phoenixville, West Chester, Center Point, Collegeville, Harleysville, North Wales, Royersford, Schwenksville, Newtown, Wycombe, Morrisville, Yardley
Pittsburgh	Clariton, Elizabeth, Canonsburg, McDonald, McMurray, Oakdale, Imperial, Aliquippa, Ambridge, Glenwillard, New Kingston, Springdale, Tarentum, Export, Harrison City
Pleasantville	Grand Valley, Oil City, Pleasantville, Titusville
Pottstown	Collegeville, Phoenixville, Pottstown, Pughtown, Royersford, Phoenixville, Schwenksville
Pottsville	Auburn, Frackville, Friedensburg, Minersville, New Philadelphia, Orwigsburg, Pottsville, Schuylkill Haven, Saint Clair, Tamaqua
Princeton	Ellwood City, New Castle, Portersville, Princeton

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchange	Local Calling Area
Reading	Bernville, Fleetwood, Hamburg, Kutztown, Leesport, Reading, Robesonia, Womelsdorf
Rochester	Alquippa, Ambridge, Baden, Beaver Falls, Hookstown, Midland, Rochester
Scottdale	Connellsville, Dawson, Mount Pleasant, Scottdale
Scranton	Clarks Summit, Dalton, Factoryville, Hamlin, Jermyn, Lake Ariel, Lake Winola, Moosic, Moscow, Olyphant, Pittston, Scranton, Taylor, Wyoming
Selinsgrove	Beaver Springs, Middleburg, Mount Pleasant Mills, Selinsgrove, Sunbury
Sharon	Mercer, Sharon, Sharpsville, West Middlesex
Shenandoah	Ashland, Frackville, Girardville, Mahanoy City, Ringtown, Shenandoah
Somerset	Berlin, Boswell, Rockwood, Somerset, Stoystown
Souderton	Center Point, Collegeville, Doylestown, Dublin, Green Lane, Harleysville, Lansdale, Line Lexington, North Wales, Pennsburg, Perkasie, Quakertown, Schwenksville, Souderton
Springville-Susquehanna	Brooklyn, Montrose, Nicholson, Rush, Springville
State College	Bellefonte, Boalsburg, Centre Hall, Port Matilda, Spring Mills, State College
Stoudsburg	Bushkill, Cresco, Lords Valley, Mount Pocono, Saylorsburg, Stroudsburg

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchange	Local Calling Area
Tamaqua	Lansford, Mahanoy City, McAdoo, New Philadelphia, Pottsville, Tamaqua
Tarentum	New Kingston, Pittsburgh Zone 20, Springdale, Tarentum
Titusville	Grand Valley, Oil City, Pleasantville, Spartansburg, Titusville
Uniontown	Brownsville, Connellsville, Fairchance, Farmington, Masontown, McClellandtown, New Salem, Port Marion, Republic, Smithfield, Smock, Uniontown
Washington	Avella, Buffalo, Canonsburg, Claysville, McMurray, Taylorstown, Washington, West Alexander
West Chester	Downington, Exton, Lenape, Mendenhall, Mortonville, Philadelphia Zone 28, West Chester, Westtown
Wilkes-Barre	Center Moreland, Dallas, Harveys Lake, Kingston, Mountaintop, Nanticoke, Nuangola, Pittston, Plymouth, Trucksville, Wilkes-Barre, Wyoming
Williamsport	Jersey Shore, Loyalsock, Trout Run, Williamsport
Yardley	Ewing, Morrisville, New Hope, Newtown, Philadelphia Zones 42, 43, and 44, Trenton, Wycombe, Yardley
York	Dover, Loganville, Manchester, Red Lion, Spring Grove, Wrightsville, York
Zelienople	Beaver Falls, Ellwood City, Evans City, Zelienople

Issued: October 10, 2003 Effective: December 9, 2003

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 – EXCHANGE ACCESS SERVICE (CONT'D)

Service Areas/Exchanges/Local Calling Areas (Rural Telephone Exchanges) [C]

Frontier Communications of Breezewood service territory

Exchange	Local Calling Area
Breezewood	Breezewood, New Granada, Everett (United d/b/a Embarq)
Needmore	Needmore, Warfordsburg, Hancock MD (C&P of MD)
New Granada	New Granada, Breezewood
Warfordsburg	Needmore, Warfordsburg, Hancock MD (C&P of MD)

Frontier Communications of Lakewood service territory

Exchange	Local Calling Area
Lakewood	Lakewood, Mahanoy City, Tamaqua (Verizon PA)
Mahanoy City	Lakewood, Mahanoy City, Tamaqua (Verizon PA)
Tamaqua	Lakewood, Mahanoy City, Tamaqua (Verizon PA)

Palmerton Telephone Company service territory

Exchange	Local Calling Area
Bowmanstown	Bowmanstown, Kresgeville, Kunkletown, Palmerton, Lehighton, Slatington
Kresgeville	Bowmanstown, Kresgeville, Kunkletown, Palmerton, Saylorsburg, Stroudsburg
Kunkletown	Bowmanstown, Kresgeville, Kunkletown, Palmerton, Saylorsburg, Stroudsburg
Palmerton	Bowmanstown, Kresgeville, Kunkletown, Alltentown, Slatington, Lehighton, Palmerton

Denver and Ephrata Telephone Company service territory

Exchange	Local Calling Area
Adamstown	Adamstown, Akron, Denver, Ephrata, Lititz, Manheim, Terre Hill, Reading
Akron	Adamstown, Akron, Denver, Ephrata, Lititz, Manheim, Leola, New Holland, Terre Hill, Lancaster
Denver	Akron, Adamstown, Denver, Ephrata, Lititz, Manheim, Terre Hill
Ephrata	Akron, Adamstown, Denver, Ephrata, Lititz, Manheim, Leola, New Holland, Terre Hill, Lancaster
Lititz	Adamstown, Akron, Denver, Ephrata, Lititz, Manheim, Leola, Lancaster, Landisville
Manheim	Adamstown, Akron, Denver, Ephrata, Lititz, Manheim, Mt. Joy, Lancaster, Landisville

[C]

SECTION 10 – EXCHANGE ACCESS SERVICE (CONT'D)

Service Areas/Exchanges/Local Calling Areas (Rural Telephone Exchanges) (Cont'd)

Frontier Communications of Pennsylvania service territory

Exchange	**Local Calling Area**
Intercourse	Intercourse, Leola, New Holland, Terre Hill, Gap (Commonwealth Tel. Co.), Lancaster, Strasburg (Verizon)
Leola	Intercourse, Leola, New Holland, Terre Hill, Akron, Ephrata, Lititz (Denver & Ephrata Tel. Co.); Lancaster (Verizon)
New Holland	Intercourse, Leola, New Holland, Terre Hill; Akron, Ephrata (Denver & Ephrata Tel. Co.); Lancaster (Verizon)
Terre Hill	Intercourse, Leola, New Holland, Terre Hill; Adamstown, Akron, Denver, Ephrata (Denver & Ephrata Tel. Co.); Green Hills, Morgantown (Conestoga Tel. & Tel. Co.)

North Pittsburgh Telephone Company service territory

Exchange	**Local Calling Area**
Cooperstown	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Wexford, Butler(United d/b/a Embarq), Nixon (United d/b/a Embarq)
Criders Corners	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Wexford, Perrysville (Verizon), Zelienople (Verizon)
Curtisville	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Wexford, Tarentum (Verizon)
Freeport	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Wexford, Tarentum (Verizon)
Gibsonia	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Wexford, Glenshaw (Verizon)
Mars	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Wexford, Perrysville (Verizon)
Saxonburg	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Wexford, Butler (United d/b/a Embarq), Tarentum (Verizon)
Wexford	Cooperstown, Criders Corners, Curtisville, Freeport, Gibsonia, Mars, Saxonburg, Perrysville (Verizon), Wexford

Armstrong Telephone Company (Murdocksville Independent) service territory

Exchange	**Local Calling Area**
Murdocksville	Clinton, Murdocksville

SECTION 10 – EXCHANGE ACCESS SERVICE (CONT'D)

Service Areas/Exchanges/Local Calling Areas (Rural Telephone Exchanges) (Cont'd)

Buffalo Valley Telephone Company service territory

Exchange	**Local Calling Area**
Lewisburg	Lewisburg, Mifflinburg, Milton (Verizon PA)
Mifflinburg	Lewisburg, Mifflinburg, Milton (Verizon PA)

Conestoga Telephone & Telegraph Company service territory

Exchange	**Local Calling Area**
Bally	Bally, Boyertown, Oley, Sassamansville, Topton, Yellow House; Allentown, Pennsburg, Pottstown (Verizon PA)
Birdsboro	Birdsboro, Douglassville, Green Hills, Morgantown, Oley, Yellow House; Pottstown, Reading (Verizon PA)
Boyertown	Boyertown, Bally, Douglassville, Oley, Sassamansville, Yellow House; Pottstown, Reading (Verizon PA)
Douglassville	Douglassville, Birdsboro, Boyertown, Green Hills, Morgantown, Oley, Yellow House; Pottstown, Reading (Verizon PA)
Green Hills	Green Hills, Birdsboro, Douglassville, Morgantown, Oley, Yellow House; Glenmoore, Honeybrook, Pughtown, Reading (Verizon PA); Terre Hill (Enterprise Tel.)
Morgantown	Morgantown, Birdsboro, Douglassville, Green Hills; Downingtown, Eagle, Exton, Chester Springs, Glenmoore, Honeybrook, Pughtown, Reading (Verizon PA); Terre Hill (Enterprise Tel.)
Oley	Oley, Bally, Birdsboro, Boyertown, Douglassville, Green Hills, Topton, Yellow House; Fleetwood, Reading (Verizon PA)
Sassamansville	Sassamansville, Bally, Boyertown; Green Lane, Pennsburg, Pottstown, Schwenksville (Verizon PA)
Topton	Topton, Bally, Oley; Allentown, Fleetwood, Kutztown, Reading (Verizon PA)
Yellow House	Yellow House, Bally, Birdsboro, Boyertown, Douglassville, Green Hills, Oley; Pottstown, Reading (Verizon PA)

Ironton Telephone Company service territories

Exchange	**Local Calling Area**
Ironton	Ironton, Emmaus, Kempton, New Smithville, New Tripoli (Verizon-North), Allentown, Bath, Bethlehem, Catasaqua, Easton, Hellertown, Kutztown, Nazareth, Northhampton, Slatington, Springtown, Upper Black Eddy (Verizon PA), Coopersburg (Commonwealth Tel. Co.), Topton (Conestoga Tel. Co.)

Issued By: William P. Hunt, III, Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 – EXCHANGE ACCESS SERVICE (CONT'D)

Service Areas/Exchanges/Local Calling Areas (Rural Telephone Exchanges) (Cont'd)

Laurel Highland Telephone Company service territories

Exchange	**Local Calling Area**
Stahlstown	Indian Head, Ligonier (Verizon PA), Stahlstown
Indian Head	Stahlstown, Connellsville (Verizon PA), Indian Head

The North-Eastern Pennsylvania Telephone Company service territories

Exchange	**Local Calling Area**
Thompson	Jackson, Susquehanna, Thompson
Union Dale	Forest City, Pleasant Mount, Union Dale
Harford	New Milford, Clifford, Harford
Jackson	New Milford, Susquehanna, Thompson, Jackson
New Milford	Hallstead, Harford, Jackson, New Milford
Clifford	Carbondale, Factoryville, Clifford
Forest City	Carbondale, Pleasant Mount, Union Dale, Forest City
Pleasant Mount	Forest City, Honesdale, Union Dale, Pleasant Mount

Pymatuning Independent Telephone Company

Exchange	**Local Calling Area**
Transfer	Greensville, Sharpsville, Sharon (Verizon), Transfer

Armstrong Telephone Company – North service territories

Exchange	**Local Calling Area**
Duke Center	Duke Center, Gradford, Eldred, Rew (Verizon PA)

Citizens Telephone Company of Kecksburg service territories

Exchange	**Local Calling Area**
Kecksburg	Kecksburg (Citizens Tel. Co. of Kecksburg), Mt. Pleasant, Latrobe, Greensburg (Verizon PA)

Frontier Communications of Canton, LLC service territories

Exchange	**Local Calling Area**
Canton	Canton, Leroy, Troy (Commonwealth Tel. Co.)
Leroy	Canton, Leroy, Troy, Towanda (Commonwealth Tel. Co.)

SECTION 10 – EXCHANGE ACCESS SERVICE (CONT'D)

Service Areas/Exchanges/Local Calling Areas (Rural Telephone Exchanges) (Cont'd)

Citizens Telecom Company of New York service territories

Exchange	Local Calling Area
Little Meadows	Appalachin, NY; Endicott, NY; Owego, NY (Verizon); Little Meadows
Quaker Lake	Binghamton, NY (Verizon); Hawleytown, NY; Quaker Lake

Lackawaxen Telephone Company service territories

Exchange	Local Calling Area
Rowland	Rowland

North Penn Telephone Company service territories

Exchange	Local Calling Area
Bentley Creek	Bentley Creek
Millerton	Millerton
Roseville	Roseville, Mansfield

South Canaan Telephone Company service territories [C]

Exchange	Local Calling Area
South Canaan	South Canaan, Waymart, Carbondale, Hamlin, Honesdale, Lake Ariel (Bell of Pennsylvania)
Waymart	South Canaan, Waymart, Carbondale, Honesdale, Lake Ariel (Bell of Pennsylvania)

[C]

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

10.5 Direct Inward Dial (DID) Service

10.5.1 DID service provides a Customer with a voice grade telephonic communications trunk channel to receive incoming voice or data calls to local telephone numbers assigned to the Customer. DID Service does not provide a line-side connection. DID Service transmits the dialed digits for all incoming calls, allowing the Customer's incoming calls to be routed as required by the Customer to the Customer's designated equipment. Charges for DID capability and DID number blocks may apply in addition to charges specified for private lines contained herein and other charges that may apply in order to deliver incoming calls to the Customer's designated equipment, depending upon Customer location and subject to the availability of facilities. C

10.5.2 So the Company may efficiently manage its number resource, the Company, at its sole discretion reserves the right to limit the quantity of DID number blocks a Customer may obtain. Requests for 30 or more DID number blocks must be provided to the Company in writing no less than five (5) months prior to activation. In addition, the Company reserves the right to review vacant DID stations or stations not in use to determine their utilization. Should the Company determine, based on its own discretion, that there is inefficient number utilization, the Company may reassign the DID numbers. The Company also reserves the right to provision service based upon the availability of facilities and equipment necessary to support the Customer's specific service requirements; pursuant to Section 10.5.1 above, additional charges shall apply where the Company provides service to Customers requiring such additional facilities or equipment. C

.

10.5.3 The Customer has no property right to the telephone number or any other call number destination associated with DID service furnished by the Company, and no right to the continuance of service through any particular end office. The Company reserves the right to change such numbers, or the end office designation associated with such number, or both, assigned to the Customer, where the Company deems it necessary to do so in the conduct of its business.

	Non-Recurring	Monthly Recurring
Individual DID Numbers	N/A	$0.50 per DID Number

C

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

10.5.4 For special situations, rates for DID Service will be determined on an Invididual Case Basis (ICB) and specified by contracts between the Company and the Customer. Notices of such contracts will be submitted to the Commission pursuant to Commission Rules.

10.5.5 Customer shall not route or transmit traffic originated through toll free (8XX) dialing, or traffic typically subject to reverse billing treatment by any means**,** including but not limited to mapping to any Carrier Identification Codes (CIC), mapping to or in conjunction with any Level 3 DID numbers that utilize the Level 3 network, or use any other routing method that may cause the originating telephone company to bill Level 3 for the origination of such traffic, without first obtaining explicit written permission from an officer of Level 3. Customers transmitting or routing such prohibited traffic shall be subject to immediate discontinuance of its service or service arrangements without advance notice, and Customer shall be liable for any charges billed to Level 3 due to such transmission or routing. In the event that Customer sends calls to Level 3 that are not approved for termination, then Customer shall pay Level 3 an additional $.04 per minute for all of its toll free (8XX) or reverse billing originated traffic. Transmission or routing of toll free (8XX) or reverse billing type of traffic to any ports or DID numbers provided by Level 3 without complying with the foregoing requirements may result in the immediate termination of Service by Level 3, in its exclusive discretion, without prior written notice to Customer. C

C

10.6 Directory Listings

For each Customer of Company-provided Exchange Access Service(s), Company shall arrange for the listing of the Customer's main billing telephone number in the directory(ies) published by the dominant Local Exchange Carrier in the area at no charge.

Text moved to Page 43.1.1

10.7 DID/ DOD Service

10.7.1 DID/DOD Service combines DID Service as described in Section 10.3 with Direct Outward Dial (DOD) service. DOD service is not provided independently of DID service. DID/DOD Service provides a Customer with a voice grade telephonic communications trunk channel to place and receive voice or data calls. DID/DOD Service does not provide a line-side connection. It transmits the dialed digits for incoming or outgoing calls, allowing the Customer's calls to be routed as required by the Customer to the Customer's designated equipment. Charges for individual DID/DOD number blocks apply in addition to charges specified for private lines contained herein and other charges may apply in order to deliver calls to the Customer's designated equipment, depending upon Customer location and subject to the availability of facilities. Other charges will apply for conversion to IP and IP transport/switching before delivery to customer as part of the Enhanced Service. ESP long distance services can be provided in conjunction with DID/DOD Service or Customers may choose to route traffic to other carriers for long distance termination. Connectivity to E911, operator services and directory assistance is supported.

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

10.7.2 So the Company may efficiently manage its numbering resources, the Company, at its sole discretion, reserves the right to limit the quantity of DID/DOD number blocks a Customer may obtain. Requests for 30 or more DID/DOD number blocks must be provided to the Company in writing no less than five (5) months prior to activation. In addition, the Company reserves the right to review vacant DID/DOD stations or stations not in use to determine their utilization. Should the Company determine, based on its own discretion, that there is inefficient number utilization, the Company may reassign the DID/DOD numbers. The Company also reserves the right to provision service based upon the availability of facilities and equipment necessary to support the Customer's specific service requirements; pursuant to Section 9.4.1 above, additional charges shall apply where the Company provides service to Customers requiring such additional facilities or equipment.

10.7.3 The Customer has no property right to the telephone number or any other call number destination associated with service furnished by the Company, and no right to the continuance of service through any particular end office. The Company reserves the right to change such numbers, or the end office designation associated with such number, or both, assigned to the Customer, where the Company deems it necessary to do so in the conduct of its business.

10.7.4 For special situations, rates for DID/DOD Services will be determined on an Individual Case Basis (ICB) and specified by contract between the Company and the Customer. Notices of such contracts, if required, will be submitted to the Commission pursuant to Commission Rules.

10.7.5 Pricing

DID/DOD Service Rates

	Non-Recurring	Monthly Recurring
Individual DID/DOD Numbers	N/A	$1.50 per DID/DOD Number

SECTION 11 - LOCAL CALLING SERVICE

11.1 Description

Local Calling Service provides a business Customer with the ability to originate calls from a Company-provided exchange access line to all other stations on the public switched telephone network bearing the designation of any central office of the exchanges and zones defined as local. The rates set forth in this section apply to all direct dialed local calls. For operator-assisted (non-aggregator) local calls, the operator charges listed in Section 11.3 apply in addition to the charges listed below.

C

C

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 11 - LOCAL CALLING SERVICE (CONT'D)

11.3 Operator Services

11.3.1 Description

11.3.1.1 Operator Handled Calling Services are provided to Customers and Users of Company-provided Exchange Access Services, and to Customers and Users of exchange access lines which the Customer subscribes to the Company's interexchange outbound calling services.

11.3.2 Definitions

C

C

Station-to-Station: Refers to calls other than person-to-person calls billed to either the end user's commercial credit card and/or non-proprietary calling card. Calls are dialed with the assistance of a Company operator. Collect calls to coin telephones and transfers of charges to third telephones which are coin telephones will not be accepted.

Third Number Billing: Provides the Customer with the capability to charge a local call to a third number which is different from the called or calling party. The party answering at the third number has the option to refuse acceptance of the charges in advance or when queried by the operator.

Collect Calls: Provides the Customer with the capability to charge a call to the called party. On the operator announcement of a collect call, the called party has the option to refuse acceptance of charges in advance or when queried by the operator.

11.3.3 Rates

In addition to any applicable usage charges, the following operator-assisted charges will apply:

	Operator Assisted Surcharges (0 +)	
Station-to-Station	$2.50	C
Third Number Billing	$2.50	C

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 11 - LOCAL CALLING SERVICE (CONT'D)

11.3.3 Rates (cont') C

	Operator Assisted Surcharges (0 +)
Collect Calls	$2.50

C

.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 11 - LOCAL CALLING SERVICE (CONT'D)

C

C

11.4 Directory Assistance

11.4.1 Description

Customers and Users of the Company's calling services (excluding toll free services), may obtain Directory Assistance in determining telephone numbers within Pennsylvania and its local calling areas by calling the Directory Assistance operator.

11.4.2 Rates

11.4.2.1 Directory Assistance charges will apply for all business customer requests for which the Company's facilities are used. Residential customers will be allowed to make up to two Directory Assistance calls each month at no charge. Each number requested is charged for as shown below. Requests for information other than telephone numbers will be charged the same rate as shown for the applicable request for telephone numbers.

	Rate	
Per Number Requested	$0.52	D

11.4.2.2 A credit will be given for calls to Directory Assistance when:

11.4.2.2.1 The Customer experiences poor transmission or is cut off during the call;

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

11.4.2.2.2 The Customer is given an incorrect telephone number; or

11.4.2.2.3 The Customer inadvertently misdials an incorrect Directory Assistance NPA.

To receive a credit, the Customer must notify the Company operator or Business Office of the problem experienced.

11.5 Lifeline Services

11.5.1 Description

Lifeline Service is a Residence offering for low-income customers who qualify for this service in accordance with the following Regulations. **NOTE: Customers who qualify for Lifeline Service may also qualify for Link Up America Service.** C

11.5.2 Regulations

(a) Lifeline Service is available to qualified residence customers and is provided via a residence individual Dial Tone Line. Lifeline Service is limited to only one Service per qualified customer or household. A potential Lifeline customer who has an outstanding final bill for telephone service which is less than (4) years old must pay the entire balance of any Basic Service final bill before being eligible for Lifeline Service.

(b) Residence Lifeline Service consists of the following tariffed standard features and optional customer elected services at the applicable rates, charges and regulations for each feature and service provided:

1. One-Party Residence Unlimited Service and Local Measured Service, if available.
2. Directory Listing (standard only).
3. Non-Published or Non-Listed Telephone Number Service.
4. Access to Directory Assistance Service.
5. Touch Tone Calling Service.
6. Access to Message Toll Telephone Service and Optional Dial Station-To-Station Calling Plan Services. However, the Residence Lifeline Dial Tone Line will be blocked from dial station access to 976/556/900 and any other type of Audiotex Service.
7. Access to Operator Services.
8. Voluntary Toll Restriction Option.
9. Link Up America (if eligible).

SECTION 11 - LOCAL CALLING SERVICE (CONT'D)

10. Access to 800/888 Services.
11. Access to Call Trace.
12. Access to Alerting and Reporting Systems (9-1-1 dialing).
13. Access to the Pennsylvania Telecommunications Relay Service.
14. Caller ID Per-call and Per-line Blocking C
15. One optional vertical service
16. A second optional vertical service, only if the first optional vertical service is voice mail from the Company.

(c) An applicant for Lifeline Service must be a current participant in one of the following Pennsylvania Department of Public Welfare (DPW) programs or be able to provide proof of income which is at or below the 150% of annual United States Census Bureau Poverty Level Guidelines For All States (Except Alaska and Hawaii) and the District of Columbia. Recertification of Lifeline Service participants will be conducted biennially by Company. C

<u>Pennsylvania Department</u> <u>of</u> <u>Public Welfare Lifeline Service Programs</u>:

* Temporary Assistance for Needy Families (TANF)
* General Assistance (GA)
* Supplemental Security Income (551) C
* Medicaid
* Food Stamps
* Low Income Home Energy Assistance Program (LIHEAP)

The DPW Programs listed above must be certified by DPW. Such certification by DPW will be provided only when a DPW client requests Lifeline Service based on the client’s status as a participant in any of the above eligibility programs. Certification by DPW will be limited to confirmation of the client’s program status (i.e., participation or nonparticipation). Participation by DPW is subject to execution of an agreement with DPW and the Company.

(d) Lifeline Service will be provided to a customer only so long as such customer continues to meet the participation and certification guidelines in 11.5.2 (c) above. At the time of initial establishment of Lifeline Service, the customer agrees to have his or her eligibility recertified as determined by Company. When the Company is notified by the customer or determines through recertification that the Lifeline Service customer is no longer a participant in the DPW programs in 11.5.2 (c) above or otherwise low-income eligible, the customer will be notified (by telephone or letter) that the Lifeline Service rate is no longer applicable. Within the stated customer notification period (10 working days from the date of the notification), the customer can contact the Company to negotiate new Dial Tone Service arrangements at applicable tariff rates (no connection charges will apply for existing services or options retained). If the customer does

SECTION 11 - LOCAL CALLING SERVICE (CONT'D)

not contact the Company by the end of the notification period, the Lifeline Service will be changed to applicable Exchange Area Dial Tone Line service at existing tariff rates (no connection charges will apply to existing services or options retained). Upon contacting the Company, the customer will have ten (10) working days to complete the low-income certification or recertification process in order to retain Lifeline Service.

(e) A Lifeline Service customer may not subscribe to any other type of residence Local Exchange Service at the same or other premises. Lifeline Service will not be provided via Foreign Exchange or Foreign Central Office Service arrangements.

(f) Only services listed in 11.5.2 (b) above will be provided to Lifeline customers. All other premium services offered by the Company will not be available.

(g) Lifeline Service customers are required to apply for the Link Up America benefit when applicable.

(h) Customer requested temporary suspension of Lifeline Service is not permitted.

(i) Lifeline Service does not apply to applicants who are full time students living in university or college controlled housing.

(j) The applicant must not be a dependent for Federal Income Tax purposes, unless he or she is 60 years of age or older.

(k) Lifeline customers are subject to all Residence service regulations in this and other tariffs of Company.

(l) Residence Lifeline Service cannot be resold by the Lifeline customer or the Lifeline customer’s agent(s).

(m) Resale of Lifeline Services are subject to wholesale rate obligations under Section 251 (c)(4) of the Telecommunications Act of 1996.

(n) All outstanding charges, account balances and service restrictions apply to existing customers who qualify for Lifeline Service. Service restrictions will remain until the arrearage(s) have been paid in full.

(o) Any Lifeline customer who has a past due balance of Toll Charges will be treated with the appropriate Chapter 64 regulations. The Residence Toll Restoral Charge applies to Lifeline Customers who are suspended for non-payment and who

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

subsequently pay their outstanding toll charges and request toll restoral. If a Lifeline customer is toll restricted for a second occurrence the Company may, at its discretion, place the Lifeline customer on permanent toll restriction.

(p) Toll-Blocking and Toll-Control services will be provided at no charge to Lifeline Service subscribers, to the extent that they are offered.

11.5.3 Dial Tone Line Monthly Rate

a. Applicable Residence Dial tone monthly rate minus $1.75 (1).

b. Lifeline Service customers will be billed the applicable Subscriber Line Charge monthly rate and will be given credit for the same amount of the Subscriber Line Charge as prescribed by the Federal Communications Commission at Dockets Nos. 00-256, 96-45, 98-77, 98-166, and 00-193. (C)

c. Lifeline Service is subject to all applicable state, local and federal taxes, and Surcharges, and to all applicable tariff rates, charges, surcharges and regulations.

NOTE:

(1) The Dial Tone Line and Subscriber Line Charge monthly rate discounts will be reduced to the extent that application of the full discount would not result in rates that are less than zero. (C)

* * *

11.6 Link Up America

11.6.1 Description

Link Up America is a program designed to promote universal service by providing a discount on service connection charges for qualified low-income customers. **NOTE: Customers who qualify for Link Up America Service may also qualify for Lifeline Service.**

11.6.2 Regulations

11.6.2.1 Link Up America is available to residence customers who meet the following eligibility criteria:

(a) The applicant must not be a dependent for federal income tax purposes, unless he or she is 60 years of age or older.

SECTION 11 - LOCAL CALLING SERVICE (CONT'D)

C

The applicant must self-certify the requirement set out in (a).

(b) An applicant for Link Up America Service must be a current participant in one of the following Pennsylvania Department of Public Welfare (DPW) programs, federal public housing, and be able to provide proof of income which is at or below 150% of the annual United States Census Bureau Poverty Level Guidelines For All States (Except Alaska and Hawaii) and the District of Columbia. Recertification of Lifeline Service participants may be conducted biennially by the Company

Pennsylvania Department of Public Welfare Link Up America Service Programs:

* Temporary Assistance for Needy Families (TANF)
* General Assistance (GA)
* Supplemental Security Income (SSI)
* Medicaid
* Food Stamps
* Low Income Home Energy Assistance Program (LIHEAP)

The DPW Programs listed above must be certified by DPW. Such certification by DPW will be provided only when a DPW client requests Link Up America Service based on the client's status as a participant in any of the above eligibility programs. Certification by DPW will be limited to confirmation of the client's program status (i.e., participation or non-participation). Participation by DPW is subject to execution of an agreement with DPW and the Company.

(c) The Link Up America discount is applicable to one access line (dial tone line) when it applies to the installation or relocation of main service at a customer's principal residence.

(d) Link Up America applicants are not exempt from Telephone Company deposit requirements.

(e) Service will not be established at discounted rates prior to receipt of certification. Service will be established at full service connection charges. If certification is received within 60 days of original application, credit will be applied to provide the Link Up America discount.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 11 - LOCAL CALLING SERVICE (CONT'D)

C

(f) The Link Up America discount does not apply to applicants who are full time students living in university or college controlled housing.

11.6.2 Rates

The Link Up America Program provides for a 50% discount on the Line Connection Charge associated with the connection of a new residence exchange access line (dial tone Line) as specified in Paragraph A.3.a preceding. The total amount of the discount may not exceed $30 and the remaining charges will be billed to the Link Up America customer in monthly installments as specified in the Telephone Company's tariffs. C

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES

12.1 Service Implementation

12.1.1 Description

Absent a promotional offering, service implementation charges will apply to new service orders or to orders to change existing service.

12.1.2 Rates

	Non-Recurring
Per Service Order	$30.00

12.2 Restoration of Service

12.2.1 Description

A restoration charge applies to the restoration of suspended service and facilities because of nonpayment of bills and is payable at the time that the restoration of the suspended service and facilities suspended is arranged. The restoration charge does not apply when, after disconnection of service, service is later re-installed.

12.2.2 Rates

	Non-Recurring
Per Occasion	$8.50

12.3 Maintenance of Service

12.3.1 When a Customer reports a trouble to the Company for clearance, and no trouble is found in the Company's facilities, the Customer shall be responsible for payment of a visit charge for the period of time from when Company personnel are dispatched to the Customer's premises to when the work is completed. Failure of Company personnel to find trouble Company facilities will result in no charge if the trouble is actually in those facilities, but not discovered at the time.

12.3.2 Where a NID exists, if the Company is unable to test for dial tone and the problem proves to be beyond the NID (within Customer premises), a maintenance charge is applicable. In the event there is no NID and/or the Company is unable to test for dial tone, then no maintenance charge will be assessed. In those cases where the Customer has bought an inside wire maintenance warranty/plan (a non-regulated service) from the Company, no maintenance charge will be applicable regardless of the dial tone test results or whether a NID exists or not.

12.3.3 The Customer shall be responsible for payment of a visit charge when the Company dispatches personnel to the Customer's premises, and the trouble is in the equipment of communications system provided by other than the Company.

12.3.4 No credit allowance will be applicable for the interruption involved if the visit charge applies.

12.4 Rate

The applicable rate is $65.00 per visit in addition to materials and/or labor charges.

12.5 Presubscription

Customers have a right to choose an intraLATA and an interLATA carrier when equipment and facilities permit. The Company allows Customers to presubscribe to the carrier of their choice for intraLATA and interLATA toll calls, without dialing an access code.

12.5.1 IntraLATA Toll Presubscription

12.5.1.1 IntraLATA Presubscription is a procedure whereby a customer designates to the Company the IntraLATA Toll Provider (ITP) which the customer wishes to be the carrier of choice for intraLATA toll calls. Such calls are automatically directed to the designated carrier without the need to use carrier access codes of additional dialing to direct the calls to the designated carrier. IntraLATA presubscription do not prevent a customer, who has presubscribed to an IntraLATA toll carrier, from using carrier access codes or additional dialing to direct calls to an alternative intraLATA toll carrier on a per call basis.

Each carrier will have one or more access codes assigned to it for various types of service. When an end user selects a carrier as its preferred intraLATA toll provider, only one access code of that carrier may be incorporated into the switching system of the Company permitting access to that carrier by the end user without dialing an access code. Should the same end user wish to use other services of the same carrier, it will be necessary for the end user to dial the necessary access code(s) to reach that carriers other service(s).

An ITP must use Feature Group D (FGD) Switched Access Service to qualify as an intraLATA toll provider unless prior arrangements have been made with or by the Company. IntraLATA toll providers must submit an Access Service Request (ASR) prior to the intraLATA toll presubscription conversion date or prior to the date on which the carrier proposes to begin participating intraLATA toll presubscription,. unless prior arrangements have been made with the Company.

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

Selection of an intraLATA toll provider by an end user is subject to the terms and conditions following.

12.5.1.2 At the option of the ITP, the nonrecurring charge for a change in intraLATA toll presubscription, as provided here in, may be billed to the ITP, instead of the end user. This may involve charges resulting from end-user initial free choice PIC changes, as specified in 12.5.1.3(a) following. This option for the ITP to be billed for the PIC change charge instead of the end user is not available for orders placed directly via the Company's Business Offices.

12.5.1.3 Presubscription Charge Application

(a) Existing end users may exercise an initial free presubscription choice, either by contacting the Company or by contacting the ITP directly. The initial free choice must be made within 90 days following implementation of intraLATA toll presubscription. The charge for the initial free choice change will be billed to the new ITP at the discretion of the Company. End users choices which constitute exercising the free initial choice are:

- Designating an ITP as their primary carrier thereby requiring no access code to access that ITPs service. Other carriers are accessed by dialing 101XXXX or other required codes.

- Choosing no carrier as a primary carrier thus requiring 101XXXX dialing to access all ITPs. This choice can be made by directly contacting the Company.

Following an existing end user's initial free selection, any subsequent selection made during the first 90 days after presubscription or any change made more than 90 days after presubscription is implemented is subject to a nonrecurring charge as set forth herein.

(b) New end users who subscribe to service after the presubscription implementation date (including an existing customer who orders an additional line) will be asked to select a primary ITP when they place an order for Company Exchange Service. If a customer cannot decide upon an intraLATA toll carrier at the time, the Company may extend a 30-day period following completion of the service request to make an intraLATA PIC choice without charge. In the interim, the customer will be assigned a "No-PIC" and will have to dial an access code to make intraLATA toll calls.

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

Initial free selections available to new end users are:

- Designate an ITP as their primary carrier thereby requiring no access code to access that ITP's service. Other carriers are accessed by dialing 1O1XXXX or other required codes.

- Choose no carrier as a primary carrier thus requiring 1O1XXXX code dialing to access all ITPs. This choice can be made by directly contacting the Company. In addition, new end users that do not select a preferred carrier will be assigned a "No-PIC".

Following a new end user's initial free selection, any subsequent selection made following implementation of intraLATA toll presubscription is subject to a nonrecurring charge as set forth herein.

(c) If an ITP elects to discontinue Feature Group D service after implementation of the intraLATA toll presubscription option, the ITP is obligated to contact, in writing, all end users who have selected the canceling ITP as their preferred intraLATA toll provider. The ITP must inform the end users that it is canceling its Feature Group D service, request that the end user select a new ITP, and state that the canceling ITP will pay the PlC change charge as provided herein. The ITP must provide written notification to the Company that this activity has taken place.

Following the ITP's discontinuance of service, the Company will bill the canceling ITP the change charge for each end user that is currently designated to the ITP at the time of discontinuance.

(d) An unauthorized PIC change is a change in the presubscribed intraLATA toll provider that the end user denies authorizing. PIC disputes for end users are resolved through an investigative process.

If an unauthorized change in intraLATA presubscription occurs, the ITP making the unauthorized change will be assessed a charge for unauthorized change in presubscription as provided in 12.5.1.7(b) following. In addition, the ITP will be assessed the applicable charge for returning the end user to their preferred intraLATA toll provider.

If an unauthorized change in intraLATA toll presubscription and interLATA presubscription occurs at the same time, on the same Business/Residence line, and the prescribed ITP is the same carrier for intraLATA and interLATA, presubscription change charges as provided herein and the Company's corresponding F.C.C. Access Tariff apply. In addition, the ITP will be assessed the applicable charges for returning the end user to their preferred intraLATA toll provider as herein and in the Company's corresponding F.C.C. Tariff.

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

12.5.1.4 Equal Access Recovery Charge

The Equal Access Recovery Charge is a charge to recover the costs that the Company has directly incurred in connection with the implementation of intraLATA toll presubscription. The Equal Access Recovery Charge is billed to intraLATA toll providers.

12.5.1.5 End User Charge Discrepancy

(a) When a discrepancy is determined regarding an end user’s designation of a preferred intraLATA toll carrier, the following applies depending upon the situation described:

- A signed letter of authorization takes precedence over any order other than subsequent, direct customer contact with the Company.

- When two or more orders are received for an end user line generated by telemarketing, the date field on the mechanized record used to transmit PlC change information will be used as the PlC authorization date. The order with the latest application date/time determines customer choice.

- If an end user denies requesting a change in intraLATA toll presubscription as submitted by an ITP, and the ITP is unable to produce a letter of authorization, signed by the end user, the ITP will be assessed all applicable change charges. The nonrecurring change charges are provided herein. The ITP will also be assessed the intraLATA toll presubscription change charge as specified herein, which was previously billed to the end user.

(b) Verification of Orders for Telemarketing

Neither the ITP or the Company shall submit a PIC change order generated by outbound telemarketinq unless and until the order has first been confirmed in accordance with the F.C.C.’s current anti-slamming practices and procedures.

12.5.1.6 PIC Switchback Option-Business/Residence

PIC Switchback is an option under which no investigation activities are performed by the Company when an end user denies requesting a change in primary carrier submitted by the ITP. The ITP participating in PIC Switchback will be billed the PlC Switchback Charge, and the presubsctiption change charge, as specified herein, to switch the end user to the end user’s previous carrier.

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

When the Company is contacted by an end user who denies requesting a change in ITP primary carrier, the end user will be credited the charge assessed for the disputed change in carrier, and will be switched back to the previous ITP at no charge. If this service is made available by the Company, ITPs may subscribe to or cancel PlC Switchback Service on 30 days notice to the Telephone Company by submitting a written request. A letter of authorization from the ITP will not be requested or accepted at a later date in the event of dispute of the charges assessed under the PIC Switchback option.

This option in no way relieves the ITP of the F.C.C. requirements for:

- Verifying all PIC orders obtained by outbound telemarketing prior to submitting those orders, or
- Instituting steps to obtain verification of orders submitted to the Company.

In addition, the end user has the option of initiating a complaint to the F.C.C. or the Public Utility Commission concerning unauthorized changes in carrier.

12.5.1.7 Rates and Charges

	Rates and Charges	Rate
(a)	The charge for a change in intraLATA Toll Presubscription	$ 5.00 per line
(b)	The charge for an unauthorized Business or Residence service change in intraLATA Toll Presubscription	$ 35.65 per line
(c)	The charge for a Business/Residence PIC Switchback change in intraLATA Toll Presubscription	$ 5.00 per line
(d)	Equal Access Recovery Charge	(Reserved for future use)

12.6 Pennsylvania Telecommunication Relay Service (TRS)

12.6.1 General

The Pennsylvania Telecommunications Relay Service is a relay telecommunication service for the deaf, hearing and/or speech disabled population of the Commonwealth. The service permits telephone communications between deaf, hearing, and/or speech disabled individuals who must use a Text Telephone and individuals with normal hearing and speech as provided in the AT&T Communications of Pennsylvania, Inc. Tariff PA. P.U.C. No.13.

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

12.6.2 Surcharge

In addition to the charges provided in this tariff and other intrastate toll tariffs in which this Company concurs, a surcharge will apply to all residence and business access lines served by this Company. This surcharge applies regardless of whether or not the access line uses the Pennsylvania Telecommunications Relay Service.

This surcharge serves as the funding vehicle for the operation of the Pennsylvania Telecommunications Relay Service, and shall be calculated by the Pennsylvania Public Utility Commission (the Commission). The Commission shall compute the Pennsylvania Telecommunications Relay Service Surcharge each year and notify local exchange carriers of the surcharge amount to be applied for the twelve month period commencing with July 1 of each year.

The Commission may revise the surcharge more frequently than annually at its discretion.

Tariff revisions will be filed whenever the Commission calculates a new surcharge amount and notifies the Company.

The following surcharge rates apply to all bills issued on or after July 1, 2006.

Per residence access line, per month	$.08	(I)
Per business access line, per month	$.09	(D)

Centrex lines will be charged on an equivalency basis as determined by the Commission.

12.6.3 Rates

Local calls will be charged at the applicable local flat rate or local measured service rate, except for calls originating from Pay Telephones, which shall be completed free of charge. All intraLATA toll calls, placed through the Pennsylvania Telecommunications Relay Service will be rated according to the applicable rates in Company's interexchange toll tariff, Pa. P.U.C. No. 1.

The Company will make available to the Telecommunications Relay Service (TRS) user either a calling card or a prepaid debit card. The rates for either option will not exceed those that would apply to identical calls for non-TRS users of coin-sent-paid service. Please refer to the appropriate Interexchange Carrier tariff for interstate charges.

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

RESERVED FOR FUTURE USE C

C

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

RESERVED FOR FUTURE USE C

C

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

RESERVED FOR FUTURE USE

C

C

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 12 - MISCELLANEOUS SERVICES AND SURCHARGES (CONT'D)

RESERVED FOR FUTURE USE C

C

Issued By: Thomas C. Stortz, Senior Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 13 – SPECIAL ARRANGEMENTS

13.1 Promotional Programs

The Company may establish temporary promotional programs to introduce present or potential customers to a service not previously received by Customers. During specific promotional periods, an offer may be made to reduce nonrecurring charges on a nondiscriminatory basis, up to the full amount, for optional products and services. Unless specifically approved elsewhere, this offer will not apply to single basic exchange access lines. The Company will provide written notice to the Commission no less than seven (7) days prior to the beginning of each promotion period identifying the promotion, specifying the terms of the promotion, the location and dates of the promotion.

13.2 Special Assembly

The Company may provide a unique intrastate service arrangement for a Customer where no tariffed services exists for the service. The unique service can be provided via a Special Assembly.

The Company will file the Special Assembly including the contract terms, conditions and rates by letter with the Communications Division.

13.3 Special Construction

Subject to the agreement of the Company and to all of the regulations contained in the tariffs of the Company, special construction and special arrangements may be undertaken on a reasonable efforts basis at the request of the Customer. Special arrangements include any service or facility relating to a regulated telecommunications not otherwise specified under tariff, or for the provision of service on an expedited basis or in some other manner different from the normal tariff conditions. Special construction is that construction undertaken:

13.3.1 where facilities are not presently available, and there is no other requirement for the facilities so constructed;

13.3.2 of a type other than that which the Company would normally utilize in the furnishing of its services;

13.3.3 over a route other than that which the Company would normally utilize in the furnishing of its services;

13.3.4 in a quantity greater than that which the Company would normally construct;

13.3.5 on an expedited basis;

13.3.6 on a temporary basis until permanent facilities are available;

13.3.7 involving abnormal costs; or

13.3.8 in advance of its normal construction.

13.4 Basis for Charges

Where the Company furnishes a facility or service on a special construction basis, or any service for which a rate or charge is not specified in the Company's tariffs, charges will be based on the costs incurred by the Company and may include, (1) nonrecurring type charges; (2) recurring type charges, (3) termination liabilities; or (4) combinations thereof. The agreement for special construction will ordinarily include a minimum service commitment based upon the estimated service life of the facilities provided.

13.5 Basis for Cost Computation

The costs referred to in Section 13.4 preceding may include one or more of the following items to the extent they are applicable:

13.5.1 installed costs of the facilities to be provided including estimated costs for the rearrangements of existing facilities. Installed costs include the cost of:

13.5.1.1 equipment and materials provided or used,

13.5.1.2 engineering, labor and supervision,

13.5.1.3 transportation,

13.5.1.4 rights of way, and

13.5.1.5 any other item chargeable to the capital account;

13.5.2 annual charges including the following:

13.5.2.1 cost of maintenance;

13.5.2.2 depreciation on the estimated installed cost of any facilities provided, based on the anticipated useful service life of the facilities with an appropriate allowance for the estimated net salvage;

13.5.2.3 administration, taxes and uncollectible revenue on the basis of reasonable average costs for these items;

13.5.2.4 any other identifiable costs related to the facilities provided; and

13.5.2.5 an amount for return and contingencies.

13.6 Termination Liability

To the extent that there is no other requirement for use by the Company, the Customer may have a termination liability for facilities specially constructed at the request of the Customer, if and only if such liability is clearly stated in a written agreement between the Company and the Customer.

13.6.1 The maximum termination liability is equal to the total cost of the special facility as determined herein, adjusted to reflect the redetermined estimate net salvage, including any reuse of the facilities provided.

13.6.2 The maximum termination liability shall be divided by the original term of service contracted for by the Customer (rounded up to the next whole number of months) to determine the monthly liability. The Customer's termination liability shall be equal to this monthly amount multiplied by the remaining unexpired term of service (rounded up to the next whole number of months), discounted to present value at six percent (6%), plus applicable taxes.

13.7 Term

The minimum term for any Level 3 Communications, LLC exchange access service shall not be less than one (1) year, unless otherwise agreed to by the Company. The Customer and Company may agree to longer minimum terms for particular services.

APPENDIX A – SERVICE AREA MAPS

Company's service area maps will mirror those of and contained in the following companies tariffs: Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; The United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen
Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company [C]
Telephone – PA P.U.C. No. 2 and South Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

COMPETITIVE LOCAL EXCHANGE CARRIER RESALE AND FACILITIES-BASED TARIFF

Regulations and Schedule of Charges

The Company will mirror the exchange area boundaries as stated in the tariffs of the Companies listed on Page 68 of this tariff. which include Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; The United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company Telephone – PA P.U.C. No. 2 and South [C]
Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

The Company's tariff is in concurrence with all applicable State and Federal Laws (including, but not limited to, 52 Pa. Code, 66 Pa. C.S. and the Telecommunications Act of 1934, as amended), and with the Commission's applicable Rules and Regulations and Orders. Any provisions contained in this Tariff that are inconsistent with the foregoing mentioned will be deemed inoperative and superseded.

Issued By: General Counsel - Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

COMPETITIVE LOCAL EXCHANGE CARRIER
RESALE AND FACILITIES-BASED TARIFF
Regulations and Schedule of Charges

The Company will mirror the exchange area boundaries as stated in the tariffs of the Companies listed on Page 68 of this tariff, which include Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; The United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company Telephone – PA P.U.C. No. 2 and South [C]
Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

The Company's tariff is in concurrence with all applicable State and Federal Laws (including, but not limited to, 52 Pa. Code, 66 Pa. C.S. and the Telecommunications Act of 1934, as amended), and with the Commission's applicable Rules and Regulations and Orders. Any provisions contained in this Tariff that are inconsistent with the foregoing mentioned will be deemed inoperative and superseded.

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

CHANGE PAGE

Supplement No. 12

Supplement No. 12 to Pa P.U.C. Tariff No. 3 provides for the following:

Addition of Rural Exchanges	Pages 40.3
Addition of Local Calling Areas for Rural Exchanges	Pages 42.4
Addition of reference to RLEC Company Boundary Maps and their corresponding Tariff Nos.	Page 68

COMPETITIVE LOCAL EXCHANGE CARRIER SERVICES

CHECK SHEET

The Title page and pages 1 through 68, inclusive, of this tariff are effective as of the date shown.

SHEET	REVISION	SHEET	REVISION	SHEET	REVISION
1	*8th Revised	31	Original	48	First Revised
1A	*9th Revised	32	Original	49	First Revised
2	*11th Revised	33	Original	50	Original
3	Original	34	Original	51	Second Revised
4	Original	35	Original	52	First Revised
5	Original	36	Original	53	Original
6	Original	37	Original	54	Original
7	Original	38	Original	55	Original
8	Original	39	1st Revised	56	Original
9	Original	40	First Revised	57	Original
10	Original	40.1	First Revised	58	Original
11	Original	40.2	Original	59	Original
12	Original	40.3*	3rd Revised	60	2nd Revised
13	Original	41	First Revised	61	1st Revised
14	Original	41.1	Original	62	1st Revised
15	Original	41.2	Original	63	1st Revised
16	Original	41.3	Original	64	1st Revised
17	1st Revised	41.4	Original	65	Original
17.1	Original	41.5	Original	66	Original
18	2nd Revised	41.6	Original	67	Original
18.1	Original	41.7	Original	68*	4th Revised
18.2	Original	42	3rd Revised		
19	2nd Revised	42.1	Original		
20	Original	42.2	Original		
21	Original	42.3	Original		
22	Original	42.4*	3rd Revised		
23	Original	43	2nd Revised		
24	Original	43.1	2nd Revised		
25	Original	43.1.1	Original		
26	Original	43.2	Original		
27	Original	44	1st Revised		
28	Original	45	1st Revised		
29	Original	46	1st Revised		
30	Original	47	1st Revised		

*Indicates new or revised page.

Issued By: General Counsel – Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 - EXCHANGE ACCESS SERVICE (CONT'D)

Exchanges in Which Full Service is Available in Citizens Telephone Company of Kecksburg Territory
Kecksburg

Exchanges in Which Full Service is Available in Frontier Communications of Canton, LLC Territory
Canton Leroy

Exchanges in Which Full Service is Available in Citizens Telecom Company of New York Territory
Little Meadows Quaker Lake

Exchanges in Which Full Service is Available in Lackawaxen Telephone Company Territory
Rowland

Exchanges in Which Full Service is Available in North Penn Telephone Company Territory
Bentley Creek Millerton Roseville

Exchanges in Which Full Service is Available in South Canaan Telephone Company Territory [C]
South Canaan Waymart [C]

Issued By: General Counsel – Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, CO 80021

SECTION 10 – EXCHANGE ACCESS SERVICE (CONT'D)

Service Areas/Exchanges/Local Calling Areas (Rural Telephone Exchanges) (Cont'd)

Citizens Telecom Company of New York service territories

Exchange	Local Calling Area
Little Meadows	Appalachin, NY; Endicott, NY; Owego, NY (Verizon); Little Meadows
Quaker Lake	Binghamton, NY (Verizon); Hawleytown, NY; Quaker Lake

Lackawaxen Telephone Company service territories

Exchange	Local Calling Area
Rowland	Rowland

North Penn Telephone Company service territories

Exchange	Local Calling Area
Bentley Creek	Bentley Creek
Millerton	Millerton
Roseville	Roseville, Mansfield

South Canaan Telephone Company service territories [C]

Exchange	Local Calling Area
South Canaan	South Canaan, Waymart, Carbondale, Hamlin, Honesdale, Lake Ariel (Bell of Pennsylvania)
Waymart	South Canaan, Waymart, Carbondale, Honesdale, Lake Ariel (Bell of Pennsylvania) [C]

APPENDIX A – SERVICE AREA MAPS

Company's service area maps will mirror those of and contained in the following companies tariffs: Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; The United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen
Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company [C]
Telephone – PA P.U.C. No. 2 and South Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

TITLE SHEET

COMPETITIVE SWITCHED ACCESS SERVICES TARIFF

This tariff applies to the Competitive Switched Access Services furnished by Level 3 Communications, LLC ("Carrier") in the State of Pennsylvania throughout the service territories of Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company [C]
Telephone – PA P.U.C. No. 2 and South Canaan Telephone Company PA P.U.C. No. 7. [C]

This tariff is on file with the Pennsylvania Public Utility Commission, and copies may be inspected, during normal business hours, at Carrier's principal place of business, 1025 Eldorado Boulevard, Broomfield, CO 80021, (720) 888-1000.

Issued By: General Counsel - Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

TITLE SHEET

COMPETITIVE SWITCHED ACCESS SERVICES TARIFF

This tariff applies to the Competitive Switched Access Services furnished by Level 3 Communications, LLC ("Carrier") in the State of Pennsylvania throughout the service territories of Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company [C]
Telephone – PA P.U.C. No. 2 and South Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

This tariff is on file with the Pennsylvania Public Utility Commission, and copies may be inspected, during normal business hours, at Carrier's principal place of business, 1025 Eldorado Boulevard, Broomfield, CO 80021, (720) 888-1000.

CHANGE PAGE

Supplement No. 24 to PA P.U.C. Tariff No. 4 provides for the following:

- Adds service territory of South Canaan Telephone Company.

Issued By: General Counsel - Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

CHECK SHEET

Current pages in this tariff are as follows:

Page	Revision	Page	Revision	Page	Revision
1*	8th Revised	25	1st Revised	53.1	Original
1A*	12th Revised	26	1st Revised	53.2	1st Revised
2*	22nd Revised	27	2nd Revised	54	2nd Revised
3	1st Revised	27.1	Original	55	1st Revised
4	2nd Revised	28	2nd Revised	56	3rd Revised
5	1st Revised	29	2nd Revised	57	2nd Revised
6	1st Revised	30	1st Revised	58	17th Revised
7	3rd Revised	31	2ndt Revised	59	8th Revised
7.1	Original	32	1st Revised	60	10th Revised
8	3rd Revised	33	1st Revised	60.1	Original
9	2nd Revised	34	1st Revised	60.2	Original
10	2nd Revised	35	1st Revised	60.3	Original
11	1st Revised	36	2nd Revised	61	Original
12	1st Revised	37	2nd Revised	62	Original
13	1st Revised	38	1st Revised	63	Original
14	1st Revised	39	2nd Revised	64	Original
15	1st Revised	40	2nd Revised		
16	1st Revised	41	2nd Revised		
17	1st Revised	42	1st Revised		
18	1st Revised	43	1st Revised		
19	2nd Revised	44	1st Revised		
20	3rd Revised	45	2nd Revised		
20.1	1st Revised	46	2nd Revised		
20.2	Original	47	2nd Revised		
21	2nd Revised	48	1st Revised		
22	2nd Revised	49	2nd Revised		
22.1	Original	50	2nd Revised		
22.2	Original	51	2nd Revised		
22.3	Original	51.1	Original		
22.4	Original	51.2	Original		
22.5	Original	51.3	Original		
23	2nd Revised	52	3rd Revised		
24	1st Revised	53	3rd Revised		

Issued By: General Counsel - Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

TABLE OF CONTENTS

DESCRIPTION **PAGE NUMBER**

Issued By: William P. Hunt, III, Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

EXPLANATION OF SYMBOLS

The following symbols shall be used in this tariff for the purposes indicated below.

(C) To signify changed listing, rule, or condition which may affect rates or charges.

(D) To signify discontinued material, including listing, rate, rule or condition.

(I) To signify an increase.

Issued By: Thomas C. Stortz, Group Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

APPLICATION OF TARIFF

This Tariff contains the regulations and rates applicable to intrastate switched access services provided by Company within the State of Pennsylvania. Company's services are furnished subject to the availability of facilities and subject to the terms and conditions of this Tariff.

The rates and regulations contained in this Tariff apply only to the services furnished by Company and do not apply, unless otherwise specified, to the lines, facilities, or services provided by a local exchange telephone company or other common carrier for use in accessing the services of Company.

The Customer is entitled to limit the use of Company's services by end users at the Customer's facilities, and may use other common carriers in addition to or in lieu of Company.

SECTION 1 - DEFINITION OF TERMS

Certain terms used generally throughout this tariff for Communications Service of this Company are defined below.

Advance Payment: Part or all of a payment required before the start of service.

Authorized User: A person, firm or corporation which is authorized by the Customer or Joint User to be connected to the service of the Customer or Joint User, respectively.

Bit: The smallest unit of information in the binary system of notation.

Commission: Pennsylvania Public Utilities Commission.

Company: Level 3 Communications, LLC, the issuer of this tariff.

Customer: The person, firm or corporation which purchases service and is responsible for the payment of charges and compliance with the Company's regulations.

Dedicated: A facility or equipment system or subsystem set aside for the sole use of a specific Customer.

End Office: The term "end office" denotes the switching system office or serving wire center where Customer station loops are terminated for purposes of interconnection to each other and/or to trunks.

End Office Access Service: For the purpose of this tariff, End Office Access Service shall mean: (1) The switching of access traffic at the carrier's end office switch and the delivery to or from the called party's premises of such traffic; (2) The routing of interexchange telecommunications traffic to or from the called party's premises, either directly or via contractual or other arrangements with an affiliated or unaffiliated entity, regardless of the specific functions provided or facilities used; or (3) Any functional equivalent of the incumbent local exchange carrier access service provided by Company including local switching, the carrier common line rate elements, and intrastate access services. End Office Access Service rate elements for Company includes any functionally equivalent access service. (4) The origination and termination of interexchange telecommunications traffic to any end user, either directly or via contractual or other arrangements with an affiliated or unaffiliated provider of interconnected VoIP service, as defined in 47 U.S.C. § 153(25), or a non-interconnected VoIP service, as defined in 47 U.S.C. § 153(36), that does not itself seek to collect reciprocal compensation charges prescribed by this subpart for that traffic, regardless of the specific functions provided or facilities used. [C]

[C]

Certain material previously appearing on this page now appears on Original Page 7.1

SECTION 1 - DEFINITION OF TERMS (CONT'D)

End User: A non-carrier customer of an intrastate telecommunications service. If a carrier uses telecommunications service for administrative purposes, it shall be deemed to be an End User.

Individual Case Basis (ICB): A service arrangement in which the regulations, rates and charges are developed based on the specific circumstances of the case.

Interconnect Carrier: Any carrier that connects to Company’s network for exchange of communications traffic.

Joint User: A person, firm or corporation which is designated by the Customer as a user of services furnished to the Customer by the Company and to whom a portion of the charges for the service will be billed under a Joint User arrangement as specified in the Company's tariff.

LATA: A Local Access and Transport Area established pursuant to the Modification of Final Judgement entered by the United States District Court for the District of Columbia in Civil Action No. 82-0192; or any other geographic area designated as a LATA in the National Exchange Carrier Association, Inc. Tariff F.C.C. No. 4.

Major Service Interruption: An interruption of Customer service due to the Company's negligence or due to its noncompliance with the provisions of this tariff.

PIU: Percent Interstate Usage

Premises: The space occupied by a Customer, Authorized User or Joint User in a building or buildings or contiguous property (except railroad rights-of-way, etc.) not separated by a highway.

Recurring Charges: The monthly charges to the Customer for services, facilities and equipment, which continue for the duration of the service.

Service Commencement Date: The first day following the date on which the Company notifies the Customer that the requested service or facility is available for use, unless extended by the Customer's refusal to accept service which does not conform to standards set forth in the Service Order or the tariffs of the Company, in which case the Service Commencement Date is the date of the Customer's acceptance. The Company and Customer may mutually agree on a substitute Service Commencement Date. In the case of Tandem Connect service ordered under option (2) of Section 12.1.1.2, the Service Commencement Date is the date on which the Customer first sends Switched Access Service traffic to the Company or accepts Switched Access Service traffic from the Company.

Certain material now appearing on this page previously appeared on 2nd Revised Page 7 and 2nd Revised Page 8.

SECTION 1 - DEFINITION OF TERMS (CONT'D)

Service Order: A written request for Company Services that may be submitted by the Customer in the format devised by the Company. The signing of a Service Order by the Customer and acceptance by the Company will initiate the respective obligations of the parties as set forth herein, but the duration of the service is calculated from the Service Commencement Date.

Shared: A facility or equipment system or subsystem that can be used simultaneously by several Customers.

Switched Access Service: Access to the switched network of an Exchange Carrier for the purpose of originating or terminating communications. Switched Access service includes Local Switching, Local Transport, and Carrier Common Line.

Toll Free: The terms "Toll Free" or "Toll Free Service" refer to an inbound telecommunications service which permits calls to be completed to the customer's location without charge to the calling party. Access to the service is gained by dialing a ten-digit telephone number which terminates at the customer's location or a location designated by that customer. Toll Free Services typically originate via normal shared use facilities and are terminated via the customer's local exchange service access line.

Transmission: The sending of electrical or optical signals over a line to a destination.

User: A Customer, Joint User, or any other person authorized by a Customer to use service provided to the Customer under a Level 3 Communications, LLC tariff.

VoIP-PSTN Traffic: The term VoIP-PSTN Traffic as used in this tariff denotes a customer's interexchange toll voice traffic exchanged with the Telephone Company in Time Division Multiplexing format over PSTN facilities, which originates and/or terminates in Internet Protocol (IP) format. VoIP-PSTN Traffic originates and /or terminates in IP format when it originates from and/or terminates to an end user customer of a service that requires IP-compatible customer premises equipment. (C)

(C)

Certain material previously appearing on this page now appears on Original Page 7.1

SECTION 2 - UNDERTAKING OF THE COMPANY

2.1 General

2.1.1 The Company does not undertake to transmit messages but offers the use of its facilities for the transmission of communications.

2.1.2 Customers and Users may use services and facilities provided under the tariffs of the Company to obtain access to services offered by other companies. The Company is responsible for the services and facilities provided under its tariffs, and for its unregulated services provided pursuant to contract, and it assumes no responsibility for any service (whether regulated or not) provided by any other entity that purchases access to the Company network in order to originate or terminate such entity's own services, or to communicate with such entity's own customers.

2.1.3 The Company shall have no responsibility with respect to billings, charges or disputes related to services used by the Customer which are not included in the services herein including, without limitation, any local, regional or long distance services not offered by the Company. The Customer shall be fully responsible for the payment of any bills for such services and for the resolution of any disputes or discrepancies with the service provider.

2.2 Description of Service

Level 3 Communications, LLC Service consists of any of the business services offered pursuant to this tariff, either individually or in combination. Each business service is offered independent of the others, unless otherwise noted. Service is offered via the Company's facilities or in combination with transmission facilities provided by other certificated carriers.

2.3 Application for Service

Unless otherwise specified herein, Customers desiring to obtain Level 3 Communications, LLC Service must complete the Company's standard service order form(s).

2.4 Shortage of Equipment or Facilities

2.4.1 The Company reserves the right to limit or to allocate the use of existing facilities, or of additional facilities offered by the Company, when necessary because of lack of facilities, or due to some other cause beyond the Company's control, on a nondiscriminatory basis.

2.4.2 The furnishing of service under the tariffs of the Company is subject to the availability on a continuing basis of all the necessary facilities and is limited to the reasonable capacity of the Company's facilities as well as facilities the Company may obtain from other carriers to furnish service from time to time as required at the sole discretion of the Company.

2.4.3 If the Company receives a request for a service offered under this Tariff that cannot be fulfilled (C)
due to a lack or shortage of facilities, the Company may agree with the entity requesting the |
service to undertake to construct or obtain the necessary facilities, in accordance with the terms of |
Section 11 of this Tariff. (C)

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

2.5 Terms and Conditions

2.5.1 Except for Third-Party Tandem Connect service, as defined in Section 14.2.3.3, Service shall be provided on the basis of a minimum period of at least one (1) year. (C)

2.5.2 Customers may be required to enter into written Service Orders which shall contain or reference a specific description of the service ordered, the rates to be charged, the duration of the services, and the terms and conditions in the tariffs of the Company. Customer will also be required to execute any other documents as may be reasonably requested by the Company.

2.5.3 At the expiration of the initial term specified in each Service Order, or in any extension thereof, service shall continue on a month to month basis at the then current rates unless terminated by either party. Any termination shall not relieve Customer of its obligation to pay any charges incurred under the Service Order and the tariffs of the Company prior to termination. The rights and obligations which by their nature extend beyond the termination of the term of the service order shall survive such termination.

2.5.4 In any action between the parties to enforce any provision of the tariffs of the Company, the prevailing party shall be entitled to recover its legal fees and court costs from the non-prevailing party in addition to other relief a court may award.

2.5.5 The tariffs of the Company shall be interpreted and governed by the laws of the State of Pennsylvania without regard for its choice of laws provision.

2.6 Liability of the Company

2.6.1 The liability of the Company for damages arising out of the furnishing of its Services, including but not limited to mistakes, omissions, interruptions, delays, or errors, or other defects, representations, or use of these services or arising out of the failure to furnish the service, whether caused by acts or omissions, shall be limited to the extension of allowances for interruption as set forth in Section 9.0, following. The extension of such allowances for interruption shall be the sole remedy of the Customer and the sole liability of the Company. The Company will not be liable for any direct, indirect, incidental, special, consequential, exemplary or punitive damages to Customer or User as a result of any Company service, equipment or facilities, or the acts or omissions or negligence of the Company, Company's employees or agents.

2.6.2 The Company shall not be liable for any delay or failure of performance or equipment due to causes beyond its control, including but not limited to: acts of God, fire, flood, explosion or other catastrophes; any law, order, regulation, direction, action, or request of the United States Government, or of any other government, including state and local governments having or claiming jurisdiction over the Company, or of any department, agency, commission, bureau, corporation, or other instrumentality of any one or more of these federal, state, or local governments, or of any civil or military authority, national emergencies, insurrections, riots, wars, unavailability of rights-of-way or materials, or strikes, lockouts, work stoppages, or other labor difficulties.

2.6.3 The Company shall not be liable for any act or omission of any entity furnishing to the Company or to the Company's Customers or Users facilities or equipment used for or with the services the Company offers.

2.6.4 The Company shall not be liable for any damages or losses due to the fault or negligence of the Customer or User or due to the failure or malfunction of Customer or User-provided equipment or facilities.

2.6.5 The Company does not guarantee nor make any warranty with respect to installations it provides for use in an explosive atmosphere. The Customer shall indemnify and hold the Company harmless from any and all loss, claims, demands, suits, or other action, or any liability whatsoever, whether suffered, made, instituted, or asserted by any other party or person(s), and for any loss, damage, or destruction of any property, whether owned by the Customer or others, caused or claimed to have been caused directly or indirectly by the installation, operation, failure to operate, maintenance, removal presence, condition, location, or use of any installation so provided.

2.6.6 The Company reserves the right to require each Customer to sign an agreement acknowledging acceptance of the provisions of this paragraph as a condition precedent to such installations.

2.6.7 The Company is not liable for any defacement of or damage to Customer or User premises resulting from the furnishing of services or equipment on such premises or the installation or removal thereof, unless such defacement or damage is caused by negligence or willful misconduct of the Company's agents or employees.

2.6.8 The entire liability for any claim, loss, damage or expense from any cause whatsoever shall in no event exceed sums actually paid the Company by Customer for the specific services giving rise to the claim. No action or proceeding against the Company shall be commenced more than one year after the service is rendered, or as required by Pennsylvania Law.

2.6.9 The Company shall not be liable for any damages or losses due to the fault or negligence of the Customer or due to the failure or malfunction of Customer provided equipment or facilities.

2.6.10 The Company shall not be liable for any damages resulting from delays in meeting any service dates due to delays resulting from normal construction procedures. Such delays shall include, but not be limited to, delays in obtaining necessary regulatory approvals for construction, delays in obtaining right-of-way approvals and delays in actual construction work.

2.6.11 The Company shall not be liable for any damages whatsoever to property resulting from the installation, maintenance, repair or removal of equipment and associated wiring unless the damage is caused by the Company's willful misconduct or negligence.

2.6.12 **THE COMPANY MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, EXCEPT THOSE EXPRESSLY SET FORTH IN ITS TARIFFS.**

2.6.13 The Company shall not be liable for any damages whatsoever associated with service, facilities, or equipment which the Company does not furnish or for any act or omission of Customer or any other entity furnishing services, facilities or equipment used for or in conjunction with Level 3 Communications, LLC.

2.7 Notification of Service-Affecting Activities

To the extent possible, the Company will provide the Customer reasonable notification of service-affecting activities that may occur in normal operation of its business. Such activities may include, but are not limited to, equipment or facilities additions, removals or rearrangements and routine preventative maintenance. Generally, such activities are not specific to an individual Customer but affect many Customers' services. No specific advance notification period is applicable to all service activities. The Company will work cooperatively with the Customer to determine the reasonable notification requirements. With some emergency or unplanned service-affecting conditions, such as an outage resulting from cable damage, notification to the Customer may not be possible.

2.8 Provision of Equipment and Facilities

2.8.1 All services along the facilities between the point identified as the Company's origination point and the point identified as the Company's termination point will be furnished by the Company, its agents or contractors.

2.8.2 The Company may undertake to use reasonable efforts to make available services to a Customer on or before a particular date, subject to the provisions of and compliance by the Customer with, the regulations contained in this tariff.

2.8.3 The Company undertakes to use reasonable efforts to maintain only the facilities and equipment that it furnishes to the Customer. The Customer, Joint User, or Authorized

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

User may not, nor may they permit others to, rearrange, disconnect, remove, attempt to repair, or otherwise tamper with any of the facilities or equipment installed by the Company, except upon the written consent of the Company.

2.8.4 Equipment the Company provides or installs at the Customer's premises for use in connection with the services the Company offers shall not be used for any purpose other than that for which the Company provided the equipment.

2.8.5 The Customer shall be responsible for the payment of service charges as set forth herein for visits by the Company's agents or employees to the premises of the Customer, Joint User, or Authorized User when the service difficulty or trouble report results from the use of equipment or facilities the Customer, Joint User, or Authorized User provided.

2.8.6 The Company shall not be responsible for the installation, operation, or maintenance of any Customer provided communications equipment. Where such equipment is connected to the facilities furnished pursuant to this tariff, the responsibility of the Company shall be limited to the furnishing of facilities offered under this tariff and to the maintenance and operation of such facilities; subject to this responsibility the Company shall not be responsible for:

2.8.6.1 The transmission of signals by Customer provided equipment or for the quality of, or defects in, such transmission; or

2.8.6.2 The reception of signals by Customer provided equipment. The Customer, Authorized User, or Joint User is responsible for ensuring that Customer provided equipment connected to Company equipment and facilities is compatible with such Company equipment and facilities. The magnitude and character of the voltages and currents impressed on Company provided equipment and wiring by the connection, operation, or maintenance of such equipment and wiring shall be such as not to cause damage to the Company provided equipment and wiring or injury to the Company's employees or to other persons. Customer will submit to Company a complete manufacturer's specification sheet for each item of equipment that is not provided by the Company and which shall be attached to the Company's facilities. The Company shall approve the use of such item(s) of equipment unless such item is technically incompatible with Company's facilities. Any additional protective, equipment required to prevent such damage or injury shall be provided by the Company at the Customer's expense.

2.8.7 Any special interface equipment necessary to achieve compatibility between the facilities and equipment of the Company used for furnishing Level 3 Communications, LLC services and the channels, facilities, or equipment of others shall be provided at the Customer's expense.

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

2.8.8 Level 3 Communications, LLC may be connected to the services or facilities of other communications carriers only when authorized by, and in accordance with, the terms and conditions of the tariffs of the other communications carrier which are applicable to such connections.

2.9 Nonroutine Installation

At the Customer's request, installation and/or maintenance may be performed outside the Company's regular business hours and/or in hazardous locations. In such cases, charges based on cost of the actual labor, material, or other costs incurred by or charged to the Company will apply. If installation is started during regular business hours but, at the Customer's request, extends beyond regular business hours into time periods including, but not limited to, weekends, holidays, and/or night hours, additional charges may apply.

2.10 Ownership of Facilities

Title to all facilities provided in accordance with the tariffs of the Company remains with the Company, its agents or contractors. The Customer shall not have, nor shall it assert, any right, title or interest in all the fiber optic or other facilities and associated equipment provided by the Company hereunder.

2.11 Optional Rates and Information Provided to the Public

The Company will promptly advise Customers who may be affected of new, revised or optional rates applicable to their service. Pertinent information regarding the Company's services, rates and charges shall be provided directly to Customers, or shall be available for inspection at the Company's local business address. If required by the Commission, the Company will cause to have published a notice of its intention to charge its rates, tolls, charges, rules and regulations in one or more newspapers in circulation in the affected area.

2.12 Continuity of Service

In the event of prior knowledge of an interruption of service for a period exceeding one day, the Customers will, if feasible, be notified in writing, by mail, at least one week in advance.

2.13 Governmental Authorizations

The provision of services is subject to and contingent upon the Company obtaining and retaining such approvals, consents, governmental authorizations, licenses and permits, as may be required or be deemed necessary by the Company. The Company shall use reasonable efforts to obtain and keep in effect all such approvals, consents, authorizations, licenses and permits that may be

SECTION 2 - UNDERTAKING OF THE COMPANY (CONT'D)

required to be obtained by it. The Company shall be entitled to take, and shall have no liability whatsoever for, any action necessary to bring the Services into conformance with any rules, regulations, orders, decisions, or directives imposed by the Federal Communications Commission or other applicable agency, and the Customer shall fully cooperate in and take such action as may be requested by the Company to comply with any such rules, regulations, orders, decisions, or directives.

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 3 - OBLIGATIONS OF THE CUSTOMER

3.1 General

The Customer shall be responsible for:

3.1.1 the payment of all applicable charges pursuant to the tariffs of the Company;

3.1.2 damage to or loss of the Company's facilities or equipment caused by the acts or omissions of the Customer or of any User; or by the noncompliance by the Customer or any User with these regulations; or by fire or theft or other casualty on the Customer's or any User's Premises, unless caused by the negligence or willful misconduct of the employees or agents of the Company;

3.1.3 providing at no charge, as specified from time to time by the Company, any needed personnel, equipment space and power to operate the Company facilities and equipment installed on the premises of the Customer or any User; and the level of heating and air conditioning necessary to maintain the proper operating environment on such premises;

3.1.4 any and all costs associated with obtaining and maintaining of the rights-of-way from the point of entry at the Customer's location to the termination point where service is finally delivered to the Customer, including, but not limited to, the costs of installing conduit or of altering the structure to permit installation of Company provided facilities. The Customer's use of such rights-of-way shall in all respects be subject to the terms, conditions and restrictions of such rights-of-way and of agreements between the Company and such third parties relating thereto, including without limitation, the duration applicable to and the condemnation of such rights-of-way, and shall not be in violation of any applicable governmental ordinance, law, rule, regulation or restriction. Where applicable, the Customer agrees that it shall assist the Company in the procurement and maintenance of such right-of-way. The Company may require the Customer to demonstrate its compliance with this section prior to accepting an order for service;

3.1.5 providing a safe place to work and complying with all laws and regulations regarding the working conditions on the premises at which the Company's employees and agents shall be installing or maintaining the Company's facilities and equipment. The Customer may be required to install and maintain the Company's facilities and equipment within a hazardous area if, in the Company's opinion, injury or damage to the Company's employees or property might result from installation or maintenance by the Company;

3.1.6 the Customer shall be responsible for identifying, monitoring, removing and disposing of any hazardous material (e.g. friable asbestos) prior to any construction or installation work;

Issued By: Thomas C. Stortz, Group Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 3 - OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.1.7 complying with all laws and regulations applicable to, and obtaining all consents, approvals, licenses and permits as may be required with respect to, the location of the Company's facilities and equipment in any Customer or User premises or the rights-of-way for which Customer is responsible under section 3.1.4; and granting or obtaining permission for the Company's agents or employees to enter the premises of the Customer or any User at any time for the purpose of installing, inspecting, maintaining, repairing, or upon termination of service as stated herein, removing the facilities or equipment of the Company;

3.1.8 not creating or allowing to be placed any liens or other encumbrances on the Company's equipment or facilities; and

3.1.9 making the Company's facilities and equipment available periodically for maintenance purposes at a time agreeable to both the Company and the Customer. No allowance will be made for the period during which service is interrupted for such purposes.

3.2 Prohibited Uses

3.2.1 The services the Company offers shall not be used for any unlawful purpose or for any use as to which the Customer has not obtained all governmental approvals, authorizations, licenses, consents and permits required to be obtained by the Customer with respect thereto.

3.2.2 The Company may require applicants for service who intend to use the Company's offerings for resale and/or for shared use to file a letter with the Company confirming that their use of the Company's offerings complies with relevant laws and Commission regulations, policies, orders, and decisions.

3.2.3 The Company may, without obtaining any further consent from the Customer, assign any rights, privileges, or obligations under this tariff. The Customer shall not, without prior written consent of the Company, assign, transfer, or in any other manner dispose of, any of its rights, privileges, or obligations under this tariff, and any attempt to make such an assignment, transfer, disposition without such consent shall be null and void.

3.2.4 The Company may require a Customer to immediately shut down its transmission of signals if said transmission is causing interference to others.

3.2.5 A Customer may not use the services so as to interfere with or impair service over any facilities and associated equipment, or so as to impair the privacy of any communications over such facilities and associated equipment.

Issued By: Thomas C. Stortz, Group Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 3 - OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.2.6 Customer use of any resold service obtained from other service providers shall also be subject to any applicable restrictions imposed by the underlying providers.

3.2.7 A Customer, Joint User, or Authorized User shall not represent that its services are provided by the Company, or otherwise indicate to its customers that its provision of services is jointly with the Company, without the written consent of the Company. The relationship between the Company and Customer shall not be that of partners or agents for one or the other, and shall not be deemed to constitute a partnership or agency agreement.

3.3 Claims

With respect to any service or facility provided by the Company, Customer shall indemnify, defend and hold harmless the Company from and against all claims, actions, damages, liabilities, costs and expenses, including reasonable attorneys' fees for:

3.3.1 any loss, destruction or damage to property of the Company or any third party, or the death or injury to persons, including, but not limited to, employees or invitees of either party, to the extent caused by or resulting from the negligent or intentional act or omission of the Customer or User or their employees, agents, representatives or invitees;

3.3.2 any claim, loss, damage, expense or liability for infringement of any copyright, patent, trade secret, or any proprietary or intellectual property right of any third party, arising from any act or omission by the Customer or User, including, without limitation, use of the Company's services and facilities in a manner not contemplated by the agreement between Customer and the Company; or

3.3.3 any claim of any nature whatsoever brought by a User with respect to any matter for which the Company would not be directly liable to the Customer under the terms of the applicable Company tariff.

3.4 Jurisdictional Reporting

The jurisdictional reporting requirements will be as specified below. When a Customer orders Switched Access Service, its projected Percent Interstate Usage (PIU) must be provided in whole numbers to the Company. These whole number percentages will be used by the Company to apportion the use and/or charges between interstate and intrastate until a revised report is received as set forth herein.

Issued By: Thomas C. Stortz, Group Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 3 – OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.4.1 Originating Access: Originating access minutes may be based on traffic originating at the State, LATA or local Switching Center level, provided that the traffic being measured is only traffic originating from the Company Local Switching Center(s). The Customer must provide the Company with a projected PIU factor on a quarterly basis as specified below. Originating access minutes will be measured as follows, based on type of access:

3.4.1.1 For Feature group D Switched Access Services, as defined in Section 14.2.1, where the Company can determine jurisdiction by its call detail, the projected PIU will be developed by the Company on a quarterly basis by dividing the measured interstate originating minutes by the total measured originating access minutes. [C]

3.4.1.2 For Feature Group D with 950 Access as defined in Section 14.2.1, the Customer must provide the Company with a projected PIU factor by supplying the Company with an interstate percentage of originating access minutes.

3.4.1.3 For 500, 700, Toll Free 8YY, calling card and operator service access, the Customer must provide the Company with a projected PIU factor for each type of access. The Customer who provides a PIU factor shall supply the Company with an interstate percentage of originating access minutes. The PIU factor will be used to determine the jurisdiction for billing purposes of 500, 700, Toll Free 8YY, calling card and operation service access. Originating Access charges will not apply to a Toll Free call that utilizes Toll Free Inter-Exchange Deliver Service as described in Section 14.2.9(B). [C] [C] [C]

3.4.1.4 If no PIU for originating minutes is submitted as specified herein, then the projected PIU will be set on a default basis of 50 percent interstate traffic and 50 percent intrastate traffic.

3.4.2 Terminating Access: For Feature Group D Switched Access Services, the Customer must provide the Company with a projected PIU factor by supplying the Company with an interstate percentage of terminating access minutes on a quarterly basis, as described in Section 3.4.4 below. If no projected PIU factor is submitted by the Customer, then the projected PIU will be set on a default basis at the same percentage as the originating PIU.

3.4.3 Except where the Company measured access minutes are used as set forth in 3.4.1 above, the Customer reported projected PIU factor as set forth above will be used until the Customer reports a different projected PIU factor, as set forth below. The revised report will serve as the basis for future billing and will be effective on the next bill date.

Issued By: William P. Hunt, III, Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 3 – OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.4.4 Effective on the first day of January, April, July and October of each year the Customer shall update its interstate and intrastate jurisdictional report. The Customer shall forward to the Company, to be received no later than 15 days after the first day of such month, a revised report showing the interstate and intrastate percentage of use for the past three months ending the last day of December, March, June and September, respectively, for each service arranged for interstate use, based solely on the traffic originating from or terminating to the Company Local Switching Center. The revised report will serve as the basis for the next three months billing and will be effective on the bill date for that service. If the Customer does not supply the reports for those services where reports are needed, the Company will assume the percentage to be the same as that provided previously. For those cases in which a quarterly report has never been received from the Customer, the Company will assume the percentages to be the same as those provided in the Access Service Request or, in the absence of an Access Service Request PIU, the Company will set the projected PIU on a default basis of 50 percent interstate traffic and 50 percent intrastate traffic.

3.4.5 Jurisdictional Reports Verification: For Switched Access Service, if a billing dispute arises or a regulatory commission questions the projected PIU factor, the Customer will provide the data used to determine the projected PIU factor. The Customer will supply the data within 30 days of the Company request.

The Customer shall keep records of call detail from which the percentage a interstate and intrastate use can be ascertained and, upon request of the Company, shall make the records available for inspection as reasonably necessary for purposes of verification of the percentages. The Company reserves the right to conduct an audit at any time during the year. The Customer, at its own expense, has the right to retain an independent auditing firm.

3.4.6 Identification and Rating of VoIP-PSTN Traffic

This section governs the rating and .identification of VoIP-PSTN Traffic. In accordance with the Federal Communications Commission's Report and Order released November 18, 2011 (FCC 11-161) and Second Order on Reconsideration released April 25, 2012 (FCC 12-47), both in WC Docket No. 10-90, et all. (together, the "FCC Orders"): (1) intrastate VoIP PSTN Traffic that originates on the Company's network and is bound for the Customer's end users is subject to the intrastate switched access rates set forth in this tariff until June 30, 2014, after which time it will be subject to interstate rates contained in the Company's Tariff F.C.C. No. 4 and (2) intrastate VoIP PSTN Traffic that is sent by the Customer for termination to Company end users is subject to interstate switched access rates set forth in the Company's Tariff F.C.C. No. 4 and in Section 15.1.3.10, following. [C]

The remainder of this section establishes the method of separating VoIP-PSTN Traffic from the Customer's traditional intrastate access traffic, so that VoIP-PSTN Traffic can be billed in accordance with the FCC Orders. . [C]

SECTION 3 – OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.4.6 Identification and Rating of VoIP-PSTN Traffic (cont'd)

Calculation and Application of Percent-VoIP- Usage Factors

The Company will determine the number of VoIP-PSTN Traffic minutes of use (MOU) to which interstate rates will be applied by applying a Percent VoIP Usage (PVU) factor to the total terminating intrastate access MOU sent to a Company end user by the Customer. Beginning July 1, 2014, the Company will apply the PVU not just to terminating access MOU but to the total intrastate access MOU exchanged between the Company and the Customer. The PVU will be derived and applied as follows: [C]

a. The Customer will calculate and furnish to the Company a factor (PVU-A) representing the whole number percentage of the total intrastate and interstate access MOU that the Customer exchanges with the Company in the State that is sent to the Company that originated in IP format.. Beginning July 1, 2014, the Customer's PVU-A shall be based on access MOU the Customer exchanges with the Company in the State that is (i) sent to the Company that originated in IP format or (ii) is received from the Company and terminated in IP format.

b. The Company will calculate a factor (PVU-B) representing the whole number percentage of the Company's total intrastate and interstate access MOU in the State that terminates in IP format. Beginning July 1, 2014, the PVU-B shall be based on access MOU in the State that originates or terminates in IP format.

c. The Company will use the PVU-A and PVU-B factors to calculate a PVU factor that represents the percentage of total terminating intrastate and interstate access MOU received from the Customer that is terminated in IP format by the Company and/or originated in IP format by the Customer. Beginning July 1, 2014, the PVU factor will represent the total access MOU exchanged between the Company and a Customer that is originated or terminated in IP format at either the Company end or Customer end. The PVU will be the sum of (i) the PVU-A factor and (ii) the PVU-B factor times (1 minus the PVU-A factor). The Company will apply the PVU factor to the total intrastate access MOU exchanged with the Customer to determine the number of VoIP-PSTN Traffic MOUs.

Example 1: The PVU-B is 10% and the PVU-A is 40%. The PVU factor is equal to 40% + (10% x 60%) = 46%. The Company will bill 46% of the Customer's terminating intrastate access MOU at its applicable interstate switched access rates.

Example 2: The PVU-B is 10% and the PVU-A is 0%. The PVU factor is equal to 0% + (100% x 10%) = 10%. The Company will bill 10% of the Customer's terminating intrastate access MOU at the Company's applicable interstate switched access rates.

Example 3: The PVU-A is 100%. No matter what the PVU-B factor is, the PVU is 100%. The Company will bill 100% of the Customer's terminating intrastate access MOU at the Company's applicable interstate switched access rates.

In all of the above examples, the Company will apply the PVU to originating as well as terminating intrastate access MOU beginning July 1, 2014. [C]

d. The Customer shall not modify its reported PIU factor to account for VoIP-PSTN Traffic.

e. Both the PVU-A and the PVU-B factors shall be based on information such as the number of each party's retail VoIP subscriptions in the state (e.g. as reported on F.C.C. Form 477), traffic studies, actual call detail or other relevant and verifiable information which will be provided to the Company upon request.

f. The Customer shall retain the call detail, work papers, and information used to develop the PVU-A factor for a minimum of one year.

g. The Company shall use a default PVU factor until such time as Customer supplies a PVU-A factor. For this purpose, Company will utilize a PVU equal to the percentage of VoIP subscribers in the state based on the Local Competition Report, as released periodically and/or such other reports as the Company deems appropriate and reasonable. Under the Local Competition Report methodology, the PVU will be the total number of incumbent LEC and non-incumbent LEC VoIP subscriptions in a state divided by the sum of those reported VoIP subscriptions plus incumbent LEC and non-incumbent LEC switched access lines.

SECTION 3 – OBLIGATIONS OF THE CUSTOMER (CONT'D)

3.4.7 The preceding section 3.4.6 will be applied to the billing of switched access charges to a Customer that is a local exchange carrier only to the extent that the Customer has also implemented billing of interstate access charges for VoIP-PSTN Traffic in accordance with FCC orders, rules and regulations.

3.4.8 Initial Implementation of PVU Factors

a. If the PVU factor cannot be implemented in the Company's billing systems by December 29, 2011, once the factor can be implemented the Company will adjust the Customer's bills to reflect the applicable PVU factor retroactively to December 29, 2011. If the Company receives a PVU-A from the Customer prior to April 15, 2012, it will apply that PVU-A pursuant to the formula contained herein retroactive to December 29, 2011. If the Company does not receive a PVU-A prior to April 15, 2012, it will apply the default PVU retroactive to December 29, 2011 and will apply the PVU-A beginning on the next billing period following the Company's receipt of the PVU-A.

b. The Company may choose to provide credits based on the reported PVU factors on a quarterly basis until such time as the billing system modifications can be implemented.

3.4.9 PVU Factor Update

The Customer may update the PVU-A factor quarterly using the method set forth herein. If the Customer chooses to submit such updates, it shall forward to the Company, no later than 15 days after the first day of January, April, July and/or October of each year, a revised PVU-A factor based on data for the prior three months, ending the last day of December, March, June and September, respectively. The revised PVU-A factor will serve as the basis for future billing and will be effective on the bill date of each such month and shall serve as the basis for subsequent monthly billing until superseded by new PVU-A factors.

3.4.10. PVU Factor Verification

Not more than twice in any year, the Company may ask the Customer to verify the PVU-A factor furnished to the Company, and the Customer may ask the Company to verify the PVU-B factor, and the respective calculations thereof. The party so requested shall comply, and shall reasonably provide the records and other information used to determine the applicable PVU-A and PVU-B factors. Notwithstanding the prior sentence, if the Customer updates its PVU-A more than twice in a year, the Company may seek to verify the PVU-A factor each time it is updated. In the event that the Customer fails to provide adequate records to enable the Company or an independent auditor to verify the Customer's PVU-A factor, the Company will continue using the most recent undisputed PVU-A factor reported by the Customer or, if no PVU-A has been provided, the default PVU.

SECTION 4 - PAYMENT ARRANGEMENTS

4.1 Payment for Service

The Customer is responsible for the payment of all charges for facilities and services furnished by the Company to the Customer and to all Users authorized by the Customer, regardless of whether those services are used by the Customer itself or are resold or shared with other persons.

4.2 Billing and Collection of Charges

4.2.1 Nonrecurring charges are due and payable within 30 days after the date an invoice is mailed to the Customer by the Company.

4.2.2 The Company shall present invoices for Recurring Charges monthly to the Customer, in advance of the month in which service is provided, and Recurring Charges shall be due and payable within 30 days after the invoice is mailed.

4.2.3 Charges based on measured usage will be included on the next invoice rendered following the end of the month in which the usage occurs, and will be due and payable within 30 days after the invoice is mailed.

4.2.4 When service does not begin on the first day of the month, or end on the last day of the month, the charge for the fraction of the month in which service was furnished will be calculated on a pro rata basis. For this purpose, every month is considered to have 30 days.

4.2.5 Billing of the Customer by the Company will begin on the Service Commencement Date. Billing accrues through and includes the day that the service, circuit, arrangement or component is discontinued.

4.2.6 With respect to Business Customers only, if any portion of the payment is received by the Company after the date due, or if any portion of the payment is received by the Company in funds which are not immediately available, then a late payment penalty shall be due to the Company. The late payment penalty shall be the portion of the payment not received by the date due, net of taxes, not compounded, multiplied by a monthly late factor of 1.5%.

4.2.7 For any check returned to the Company due to insufficient funds, uncollected funds, or closed account, a $25.00 fee will be assessed per check returned.

4.2.8 Although it is the intent of the Company to submit timely statements of charges, failure by the Company to do so in a timely manner shall not constitute a breach of the Company's obligations under this tariff or a waiver of the Company's right to payment of the incurred charges, and, except for the assertion by the Customer that the Company's right to payment is barred by an applicable statute of limitations, the Customer shall not be entitled to dispute the Company's bill(s) based on the Company's failure to submit them in a timely fashion. (C)
|
|
|
|
|
(C)

SECTION 4 – PAYMENT ARRANGEMENTS (CONT'D)

4.2.9 Switched Access Services Provided By More Than One Local Exchange Carrier (C)

4.2.9.1 General.

When Switched Transport service is provided by more than one Local Exchange Carrier, the carriers involved will mutually agree upon one of the billing methods below. The Multiple Bill Option will be used unless the Company specifies otherwise in writing. The Customer will place the ASR as specified in Section 12 of this Tariff.

4.2.9.2 Meet Point Billing.

Meet Point Billing is required when an access service is provided by multiple Local Exchange Carriers for FGB or FGD Switched Access services.

There are two Meet Point Billing Options – Single Bill and Multiple Bill. The Company shall notify the Customer of: (a) the Meet Point Billing Option that will be used; (b) the Local Exchange Carrier(s) that will render the bill(s); (c) the Local Exchange Carrier(s) to whom payment(s) should be remitted, and (d) the Local Exchange Carrier(s) that will provide the bill inquiry function.

The Company shall provide such notification at the time that an ASR is placed requesting access service. Additionally, the Company shall provide this notice in writing 30 days in advance of any change (C)

SECTION 4 – PAYMENT ARRANGEMENTS (CONT'D)

4.2.9.2.1. Single Bill Option. (C)

The Single Bill Option allows the Customer to receive one bill from one Local Exchange Carrier or its billing agent for access services.

The Local Exchange Carrier(s) that renders the bill to the Customer may provide to the Customer, cross references to the other Local Exchange Carrier(s) service and/or the common circuit identifiers based upon industry standards as contained in the Multiple Exchange Carrier Access Billing (MECAB) Guidelines. Should a billing dispute arise, the terms and conditions of the Billing Company(s) will apply.

For usage rated access services the access minutes of use will be compiled by the Initial Billing Company and used by the Initial Billing Company and any subsequent Billing Company(s) for the development of access charges.

(x) The Initial Billing Company for FGB and FGD Switched Access services is normally the end user's serving office and for WATS usage the Initial Billing Company is normally the WATS serving office. When the Initial Billing Company is other than the normally designated Local Exchange Carrier, the Local Exchange Carrier will notify the Customer.

(y) The Subsequent Billing Company(s) is any Local Exchange Carrier(s) in whose territory a segment of the Switched Transport Facility is provided and/or where the customer designated location is located.
The Single Bill option provides three billing alternatives, Single Bill/Single Tariff, Single Bill/Pass-Through Billing and Single Bill/Multiple Tariff which are described following:

4.2.9.2.1.1 Single Bill/Single Tariff.

Each Local Exchange Carrier will receive an ASR or a copy of the ASR from the Customer as specified in Section 12 of this Tariff and arrange to provide the service. The Initial Billing Company will: (a) determine the applicable charges and bill in accordance with its tariff; (b) include all recurring and nonrecurring rates and charges of its tariff; and (c) forward the bill to the Customer. (C)
The Customer will remit the payment to the Initial Billing Company.

SECTION 4 – PAYMENT ARRANGEMENTS (CONT'D)

4.2.9.2.1.2 Single Bill/Pass-Through Billing.
Each Local Exchange Carrier will receive an ASR or a copy of the ASR from the Customer as specified in Section 12 of this Tariff and arrange to provide the service. Each Local Exchange Carrier will: (a) determine its portion of Switched Transport as in Section 4.2.9.2.3; (b) determine the applicable charges and bill in accordance with its tariff; (c) include all recurring and nonrecurring rates and charges of its tariff; and (d) forward the bill to the Initial Billing Company for meet point billed access services. The Initial Billing Company will: (w) apply usage data, when needed, to the bill and calculate the charges; (x) identify each involved Local Exchange Carrier's charges separately on the bill; (y) combine all the bills of the involved Local Exchange Carriers of a meet point billed access service into one access bill; (z) forward the bill to the Customer; and (q) advise the Customer how to remit the payment, either directly to each Local Exchange Carrier involved in the provision of this meet point billed service; or, as a single payment made to the Initial Billing Company. If payments are to be sent directly to the Initial Billing Company, the Subsequent Billing Company(s) will provide the Customer with written authorization for the payment arrangement. (C)

4.2.9.2.1.3 Single Bill/Multiple Tariff.
Each Local Exchange Carrier will receive an ASR or a copy of the ASR from the Customer as specified in Section 12 of this Tariff and arrange to provide the service. The Initial Billing Company will: (a) determine each Local Exchange Carrier's portion of switched transport as set forth in Section 4.2.9.2.3; (b) determine the applicable charges and bill in accordance with each Local Exchange Carrier's tariff; (c) include all recurring and nonrecurring charges for each involved Local Exchange Carrier; (d) identify each involved Local Exchange Carrier's charges separately on the bill; (e) forward the bill to the Customer; and (f) advise the Customer how to remit the payment, either directly to each Local Exchange Carrier involved in the provision of this meet point billed service; or, as a single payment made to the Initial Billing Company. If payments are to be sent directly to the Initial Billing Company, the Subsequent Billing Company(s) will provide the Customer with written authorization for the payment arrangement (C)

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 4 – PAYMENT ARRANGEMENTS (CONT'D)

4.2.9.2.2 Multiple Bill Option.

The Multiple Bill option allows all Local Exchange Carriers providing service to bill the Customer for their portion of a jointly provided access service. Each Local Exchange Carrier will: (a) determine its portion of the Switched Transport as set forth in Section 4.2.9.2.3; (b) determine the applicable charges and bill in accordance with its tariff; (c) include all recurring and nonrecurring rates and charges of its tariff; and (d) forward the bill to the Customer. In cases where the Company provides tandem switching and transport functions, the Local Exchange Carrier that provides end office and related functions may choose to bear the Company's charges in connection with switched access services provided jointly by the Company and such other Local Exchange Carrier. Where the other Local Exchange Carrier so chooses, the Company will bill such other Local Exchange Carrier for its services, and the other Local Exchange Carrier shall render appropriate bills for its services to the Customer in accordance with its own tariffs. (C)

The Customer will remit the payments directly to each Local Exchange Carrier.

4.2.9.2.3 Meet Point Billing Mileage Calculation.

Each Local Exchange Carrier's portion of the Switched Transport mileage will be determined as follows:

4.2.9.2.3.1 For Switched Access Tandem-Switched Transport Services, determine the appropriate Tandem-Switched Transport - Facility total miles by computing the number of miles from the access tandem to the relevant serving wire center (i.e., end user serving wire center, or WATS Serving Office), using the V&H method as set forth in the NECA Tariff FCC No. 4. For Switched Access Direct-Trunked Transport determine the appropriate Direct-Trunked Transport total miles by computing the number of miles between the relevant serving wire centers involved (i.e., customer designated location serving wire center, Hub Wire Center, WATS Serving Office, end office, or access tandem) using the V&H method as set forth in the NECA Tariff FCC No. 4. Where the calculated miles include a fraction, the value is rounded up to the next full mile. Notwithstanding the foregoing, the total mileage from a Company tandem to a subtending end office shall be capped at ten (10) miles irrespective of actual airline miles.

4.2.9.2.3.2 Determine the billing percentage (BP), as set forth in the NECA Tariff FCC No. 4. This represents the portion of the Service provided by each Local Exchange Carrier.

4.2.9.2.3.3 For Switched Access Tandem-Switched Transport; (a) multiply the number of access minutes of use times the number of airline miles as set forth in Section 4.2.9.2.3.1, times the BP of each Local Exchange Carrier as set forth in Section 4.2.9.2.3.2, times the Tandem-Switched Transport - Facility rate; (b) multiply the Tandem-Switched Transport - Termination rate times the number of access minutes times the quantity of terminations.

Example of Billing Percentage (BP) Method Using the Multiple Bill Option: The Tandem-Switched Transport - Facility between Office X and Office Y is jointly provided by telephone companies A and B. The following example reflects the rate for Local Exchange Carrier A. Rates for Local Exchange Carrier B would appear in its appropriate Access Tariff. (C)

SECTION 4 – PAYMENT ARRANGEMENTS (CONT'D)

4.2.9.2.3.4 For Switched Access Tandem-Switched Transport; (a) multiply the number of access minutes of use times the number of airline miles as set forth in Section 4.2.9.2.3.1, times the BP of each Local Exchange Carrier as set forth in Section 4.2.9.2.3.2, times the Tandem-Switched Transport - Facility rate; (b) multiply the Tandem-Switched Transport - Termination rate times the number of access minutes times the quantity of terminations. (C)

Example of Billing Percentage (BP) Method Using the Multiple Bill Option:

The Tandem-Switched Transport - Facility between Office X and Office Y is jointly provided by telephone companies A and B. The following example Airline miles from Local Exchange Carrier A (office X) to Local Exchange Carrier B (office Y) = 10 airline miles as set forth in NECA Tariff FCC No. 4.

4.2.9.2.3.5 Billing Percentage for each Local Exchange Carrier (from NECA Tariff FCC No. 4).

Local Exchange Carrier A = 40%

Local Exchange Carrier B = 60%

4.2.9.2.4 Access Minutes for Local Exchange Carrier A = 9000.

4.2.9.2.5 Tandem-Switched Transport - Facility rate for Local Exchange Carrier A = SWT FAC

4.2.9.2.6 Tandem-Switched Transport - Termination Rate = SWT TERM

NOTE: The Tandem-Switched Transport - Termination rate does not apply in situations where there is an intermediate, non-terminating Local Exchange Carrier involved in the provision of the Switched Transport Facility.

Formula:
Access Minutes (AM) x Airline Miles (ALM) x Billing Percentage (BP) x Tandem-Switched Transport Facility Rate (SWT FAC) + [Tandem-Switched Transport - Termination Rate (SWT TERM) x Access Minutes (AM) x Quantity of Terminations (TERMS)] = Total

Calculation:

Local Exchange Carrier A

AM ALM BP SWT FAC SWT TERM AM TERMS

9,000 x 10 x .40 x SWT FAC + [SWT TERM x 9,000 x TERMS]=TOTAL (C)

SECTION 4 – PAYMENT ARRANGEMENTS (CONT'D)

4.2.9.2.7 For Switched Access Direct-Trunked Transport, multiply the number of airline miles as in (1), times the BP for each Local Exchange Carrier as in (2), times the Direct-Trunked Transport Facility rate elements. For DS1 and DS3 Direct-Trunked Transport, multiply the Direct-Trunked Transport Termination rate times the number of terminations provided by the Local Exchange Carrier (C)

4.2.9.3 All other appropriate recurring and nonrecurring charges in each Local Exchange Carrier's Access tariff are applicable.

4.2.9.4 Where the Tandem-Switched Transport - Facility is provided by more than one Local Exchange Carrier, the Tandem-Switched Transport - Termination rate applies for the termination at the Local Exchange Carrier end of the Tandem-Switched Transport (i.e., the first point of switching or the end office serving the end user). The Tandem-Switched Transport - Termination rate will not apply when the Local Exchange Carrier is the intermediate provider of the Switched Transport Facility.

4.2.9.5 The Interconnection Charge for Switched Transport, if any, shall be billed by the Local Exchange Carrier in whose territory the end office is located.

4.2.9.6 The Shared Trunk Port for Tandem-Switched Transport shall be billed by the Local Exchange Carrier in whose territory the end office is located.

4.2.9.7 For tandem routed trunks, the dedicated trunk port shall be billed by the Local Exchange Carrier owning the tandem. For end office direct routed trunks, the dedicated trunk port shall be billed by the Local Exchange Carrier owning the end office on a single bill, single tariff or multiple bill, multiple tariff meet point billing arrangement.

4.2.10 The shared multiplexing charge will be assessed to the Interexchange Carrier/Customer by the Local Exchange Carrier owning the access tandem under the multiple bill, multiple tariff meet point billing option, and to the initial billing company, by the Local Exchange Carrier owning the access tandem, under the single bill, single tariff meet point billing option. (C)

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

(C)
|
|
|
|
|
|
|
|
(C)

4.3 Advance Payments

4.3.1 To safeguard its interests, the Company may require a Business Customer to make an advance payment before services and facilities are furnished. The advance payment will not exceed an amount equal to the nonrecurring charge(s) and the first month's estimated recurring charges for the service or facility. In addition, where special construction is involved, the advance payment may also include an amount equal to the estimated nonrecurring charges for the special construction and recurring charges (if any) for a period to be set between the Company and the Customer. The advance payment will be credited to the Customer's initial bill and may be required in addition to a deposit.

4.3.2 A customer whose service has been discontinued for nonpayment of bills will be required to pay the unpaid balance due carrier and may be required to pay reconnect charges.

4.4 Deposits

4.4.1 The Company may, in order to safeguard its interests, require an applicant to make a suitable deposit to be held by the Company as a guarantee of the payment of charges.

4.4.2 A deposit will be required under the following conditions:

4.4.2.1 Applicant does not have verifiable credit with any Level 3 Communications, LLC affiliate anywhere within the region in the same or similar business; or

4.4.2.2 Applicant has had previous verifiable Service with any Level 3 Communications, LLC affiliate anywhere within the region but has an outstanding and unpaid bill for Service; or has not established satisfactory credit. Satisfactory credit for an Service customer is defined as twelve consecutive months of service without a suspension of service for nonpayment or with no more than one notification of intent to suspend service for nonpayment.

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.4.2.3 Applicant for nonresidential service will be given credit for previous nonresidential service only if the applicant is same business entity to which such service was previously provided.

4.4.3 An initial deposit or an additional deposit will be required of an existing customer when high risk is indicated and existing security is insufficient. Such requirement will be imposed when a payment history includes a suspension of service for nonpayment during the previous twelve month period.

4.4.4 The Company reserves the right to provide for installment payment of the deposit if the circumstances warrant.

4.4.5 Any deposit required of an existing Customer is due and payable within ten days after the requirement is imposed. This requirement shall be in writing and the payment date shall be on or after the due and payable date for the current bill. If said deposit or installment thereof, as appropriate, is not paid within the aforementioned time frame, the Company may suspend service of the Customer without further notice. The following are exceptions to this provision:

4.4.5.1 In the event service is suspended for a Customer for nonpayment, an initial or additional deposit shall be required prior to the restoration of service if existing security is insufficient.

4.4.5.2 In the event prior indebtedness or prior unsatisfactory credit has been determined subsequent to the initial establishment of service due to misrepresentation of the facts by the Customer, a deposit shall be due and payable within five days upon verbal notification and written confirmation or within ten days when notification can only be provided in writing. The ten day period shall be measured from the mailed date of the written notice. If said deposit is not paid within the aforementioned time frame, the Company may suspend service to the Customer without further notice.

4.4.6 The amount of the deposit shall be the estimated charges for the Service which will accrue for a 2-month period. All applicants and existing Customers shall be treated uniformly for the determination and application of deposits.

4.4.7 When it is determined that a deposit is required under the conditions specified above, the applicant or Customer may, in lieu of or in addition to making the deposit, arrange for an acceptable third party to guarantee payment of his charges by executing on his behalf a Guarantee of Payment Agreement with the Company. An acceptable third party guarantor for Service is a current non-residential customer with at least two years continuous service, whose payment history for the most recent twelve month period is satisfactory.

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.4.8 The fact that a deposit has been made in no way relieves the Customer from complying with the Company's regulations as to advance payments, or the prompt payment of bills on presentation.

4.4.9 The deposit will bear simple interest computed from the date of its receipt by the Company to the date the deposit is refunded, or service is terminated, or annually upon request of the Customer. In the event that a deposit is retained during time periods having different rates of interest, the interest accrued on the deposit will be calculated using the interest rate applicable to each time period.

4.4.10 Simple interest shall be credited or paid to the Customer while the Company holds the deposit. The interest rate shall be specified by the Pennsylvania Public Utility Commission.

4.4.11 When service is terminated, the amount of the initial or additional deposit, with any interest due, will be credited to the Customer's account and any credit balance which may remain will be refunded. After an existing customer has established satisfactory credit, the amount of the deposit, with any interest due, will be either credited to the account or at the option of the Customer, refunded. Satisfactory credit for a Customer is defined as twelve consecutive months of Service without suspension for nonpayment and with no more than one notification of intent to suspend service for nonpayment.

4.5 Discontinuance of Service

4.5.1 Upon nonpayment of any amounts owing to the Company, the Company may, by giving ten days prior written notice to the Customer, discontinue or suspend service without incurring any liability.

4.5.2 Upon violation of any of the other material terms or conditions for furnishing service the Company may, by giving 30 days prior notice in writing to the Customer, discontinue or suspend service without incurring any liability if such violation continues during that period.

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.5.3 Upon condemnation of any material portion of the facilities used by the Company to provide service to a Customer, or if a condition immediately dangerous or hazardous to life, physical safety or property exists, or if a casualty renders all or any material portion of such facilities inoperable beyond feasible repair, the Company, by notice to the Customer, may discontinue or suspend service without incurring any liability.

4.5.4 Upon the Customer's insolvency, assignment for the benefit of creditors, filing for bankruptcy or reorganization, or failing to discharge an involuntary petition within the time permitted by law, the Company may immediately require a deposit without incurring any liability.

4.5.5 Upon any governmental prohibition or required alteration of the services to be provided or any violation of an applicable law or regulation, the Company may immediately discontinue service without incurring any liability.

4.5.6 Upon the Company's discontinuance of service to the Customer under paragraphs 4.5.1 or 4.5.2 above, the Company, in addition to all other remedies that may be available to the Company at law or in equity or under any other provision of the tariffs of the Company, may declare all future monthly and other charges which would have been payable by the Customer during, the remainder of the minimum term for which such services would have otherwise been provided to the Customer to be immediately due and payable (discounted to present value at six percent (6%)).

4.5.7 Any Customer or Applicant for Service requesting the opportunity to dispute any action or determination of company under the Commission's Customer Service Rules shall be given an opportunity for a supervisory review by the Company immediately following Customer's request for such review. Service will not be disconnected pending completion of the review.

4.6 <u>Cancellation of Application for Service</u>

4.6.1 Applications for service are noncancellable unless the Company otherwise agrees. Where the Company permits the Customer to cancel an application for service prior to the start of service or prior to any special construction, no charges will be imposed except for those specified below.

4.6.2 Where, prior to cancellation by the Customer, the Company incurs any expenses in installing the service or in preparing to install the service that it otherwise would not have incurred, a charge equal to the costs the Company incurred, less net salvage, shall apply, but in no case shall this charge exceed the sum of the charge for the minimum period of services ordered, including installation charges, and all charges others levy against the Company that would have been chargeable to the Customer had service begun (all discounted to present value at six percent (6%)).

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.6.3 Where the Company incurs any expense in connection with special construction, or where special arrangements of facilities or equipment have begun, before the Company receives a cancellation notice, a charge equal to the costs incurred, less net salvage, applies. In such cases, the charge will be based on such elements as the cost of the equipment, facilities, and material, the cost of installation, engineering, labor, and supervision, general and administrative expense, other disbursements, depreciation, maintenance, taxes, provision for return on investment, and any other costs associated with the special construction or arrangements.

4.6.4 The special charges described in paragraphs 4.6.1 through 4.6.3, above, will be calculated and applied on a case-by-case basis.

4.7 Changes in Service Requested

If the Customer makes or requests material changes in circuit engineering, equipment specifications, service parameters, premises locations, or otherwise materially modifies any provision of the application for service, the Customer's installation fee shall be adjusted accordingly.

4.8 Taxes

The Customer is responsible for the payment of Federal excise taxes, gross receipts, access, state and local sales and use taxes and all taxes, fees, surcharges (however designated) and other exactions imposed on the Company or its services by governmental jurisdictions, other than taxes imposed generally on corporations. Any taxes imposed by a local jurisdiction (e.g. county and municipal taxes) will only be recovered from those customers residing in the affected jurisdictions. All such taxes, fees, and charges shall be separately designated on the Company's invoices, and are not included in the tariffed rates. It should be the responsibility of the Customer to pay any such taxes that subsequently become applicable retroactively.

4.9 Disputed Bills

4.9.1 The Customer may dispute a bill in good faith only by written notice to the Company. (C)
Unless such notice is received within 90 days (commencing 5 days after such bills have |
been mailed or otherwise rendered per the Company's normal course of business), the bill (C)
statement shall be deemed to be correct and payable in full by Customer. Any Customer who has a dispute shall be advised by the Company that the Customer may file a formal or
informal complaint with the Commission. Such claim must identify in detail the basis for (C)
the dispute, and if the Customer withholds disputed amounts, it must identify the account |
number under which the bill has been rendered, the date of the bill, and the specific items |
on the bill being disputed to permit the Company to investigate the merits of the dispute. | (C)

SECTION 4 - PAYMENT ARRANGEMENTS (CONT'D)

4.9 Disputed Bills (cont'd)

4.9.2 The date of the dispute shall be the date on which the Customer furnishes the Company the following account information:

- A clear explanation of the basis of the dispute, including what the Customer believes is incorrect (e.g., nonrecurring charge; mileage; circuit identification) and the reason why the Customer believes the bill is incorrect (e.g., monthly rate billed not same as in tariff; facility not ordered; service not received);
- The account number under which the bill was rendered;
- The date of the bill;
- The invoice number;
- The exact dollar amount in dispute;
- The universal service order code(s)(USOCs) and/or rate element associated with the service;
- Details sufficient to identify the specific amount(s) and item(s) in dispute;
- The name of the person initiating the Customer's dispute;
- Additional data as the Company reasonably requests from the Customer to resolve the dispute. The request for such additional information shall not affect the Customer's dispute date as set forth preceding.

4.9.3 The date of resolution is the date the Company completes the investigation and credits the Customer account or confirms the billing as accurate and denies the dispute.

4.9.4 In the event that a billing dispute concerning any charges billed to the Customer by the Company is resolved in favor of the Company, any payments withheld pending settlement of the dispute shall be subject to the late payment penalty set forth in 4.2.6 preceding.

SECTION 5 - USE OF CUSTOMER'S SERVICE BY OTHERS

5.1 Resale and Sharing

Any service provided under the Company tariffs may be resold to or shared with other persons at the option of Customer, except as provided in 5.3, following. Customer remains solely responsible for all use of services ordered by it or billed to its telephone number(s) pursuant to the tariffs of the Company, for determining who is authorized to use its services, and for notifying the Company of any unauthorized use. Business rates apply to all service that is resold or shared.

5.2 Joint Use Arrangements

Joint use arrangements will be permitted for all services available for resale and sharing pursuant to the Company tariffs. From each joint use arrangement, one member will be designated as the Customer responsible for the manner in which the joint use of the service will be allocated. Level 3 Communications, LLC will accept orders to start, rearrange, relocate, or discontinue service only from the Customer. Without affecting the Customer's ultimate responsibility for payment of all charges for the service, each Joint User shall be responsible for the payment of the charges billed to it.

5.3 Transfers and Assignments

5.3.1 The Customer shall not, without prior written consent of the Company, assign, transfer, or in any other manner dispose of, any of its rights, privileges, or obligations under this tariff, and any attempt to make such an assignment, transfer, disposition without such consent shall be null and void. (C)
|
|
|
(C)

SECTION 6 - CANCELLATION OF SERVICE

6. If a Customer cancels a Service Order or terminates services before the completion of the term for any reason whatsoever other than a Major Service Interruption, Customer agrees to pay to the Company the following sums, within 21 days of the effective date of the cancellation or termination and be payable under the terms set forth in Section 4.0, preceding: all costs, fees and expenses reasonably incurred in connection with. (C)

6.1. All Nonrecurring charges as specified in the Company's tariffs, plus

6.2. Any disconnection, early cancellation or termination charges reasonably incurred and paid to third parties by the Company on behalf of Customer, plus

6.3 All Recurring Charges specified in the applicable Company tariff for the balance of the then current term. (C)

SECTION 7 - NOTICES AND COMMUNICATIONS

7.1 The Customer shall designate on the Service Order an address to which the Company shall mail or deliver all notices and other communications, except that Customer may also designate a separate address to which the Company's bills for service shall be mailed.

7.2 The Company shall designate on the Service Order an address to which the Customer shall mail or deliver all notices and other communications, except that the Company may designate a separate address on each bill for service to which the Customer shall mail payment on that bill.

7.3 All notices or other communications required to be given pursuant to the tariffs of the Company will be in writing. Notices and other communications of either party, and all bills mailed by the Company, shall be presumed to have been delivered to the other party on the third business day following placement of the notice, communication or bill with the U.S. Mail or a private delivery service, prepaid and properly addressed, or when actually received or refused by the addressee, whichever occurs first.

7.4 The Company or the Customer shall advise the other party of any changes to the addresses designated for notices, other communications or billing, by following the procedures for giving notice set forth herein.

SECTION 8 - CUSTOMER EQUIPMENT AND CHANNELS

8.1 General

A User may transmit any form of signal that is compatible with the Company's equipment, but except as otherwise specifically stated in its tariffs, the Company does not guarantee that its services will be suitable for any particular purpose. (C)

8.2 Station Equipment

8.2.1 Terminal equipment on the User's Premises and the electric power consumed by such equipment shall be provided by and maintained at the expense of the User. The User is responsible for the provision of wiring or cable to connect its terminal equipment to the Company's Point of Connection.

8.2.2 The Customer is responsible for ensuring that Customer-provided equipment connected to the Company equipment and facilities is compatible with such equipment and facilities. The magnitude and character of the voltages and currents impressed on Company-provided equipment and wiring by the connection, operation, or maintenance of such equipment and wiring shall be such as not to cause damage to Company-provided equipment and wiring or injury to the Company's employees or to other persons. Any additional protective equipment required to prevent such damage or injury shall be provided by the Company at the Customer's expense.

8.2.3 Customer provided station equipment may be attached to services provided under the tariffs of the Company subject to Part 68 of the FCC Rules and to any applicable provisions of the tariffs of the Company and is the sole responsibility of the Customer.

8.2.4 The Company is not responsible for malfunctions of Customer-owned telephone sets or other Customer-provided equipment, or for misdirected calls, disconnects or other service problems caused by the use of Customer-owned equipment.

8.3 Interconnection of Facilities

8.3.1 Any special interface equipment necessary to achieve compatibility between the facilities and equipment of the Company used for furnishing Communications Services and the channels, facilities, or equipment of others shall be provided at the Customer's expense.

8.3.2 Communications Services may be connected to the services or facilities of other communications carriers only when authorized by, and in accordance with, the terms and conditions of the tariffs of the other communications carriers which are applicable to such connections.

8.3.3 Facilities furnished under the tariffs of the Company may be connected to customer provided terminal equipment in accordance with the provisions of the tariffs of the Company. All such terminal equipment shall be registered by the Federal Communications Commission pursuant to Part 68 of Title 47, Code of Federal Regulations; and all User provided wiring shall be installed and maintained in compliance with those regulations.

8.4 Tests and Adjustments

Upon suitable notice, the Company may make such tests, adjustments, and inspections as may be necessary to maintain the Company's facilities in satisfactory operating condition. No interruption allowance will be credited to the Customer for the period during which the Company makes such tests, adjustments, or inspections.

8.5 Inspections

8.5.1 Upon suitable notification to the Customer, and at a reasonable time, the Company may make such tests and inspections as may be necessary to determine that the User is complying with the requirements set forth in Section 2.8 for the installation, operation, and maintenance of Customer-provided facilities, equipment, and wiring in the connection of Customer-provided facilities and equipment to Company-owned facilities and equipment.

8.5.2 If the protective requirements for Customer-provided equipment are not being complied with, the Company may take such action as it deems necessary to protect its facilities, equipment, and personnel. The Company will notify the Customer promptly if there is any need for further corrective action. Within ten days of receiving this notice, the Customer must take this corrective action and notify the Company of the action taken. If the Customer fails to do this, the Company may take whatever additional action is deemed necessary, including the suspension of service, to protect its facilities, equipment and personnel from harm.

SECTION 9 - ALLOWANCES FOR INTERRUPTIONS IN SERVICE

9.1 General

9.1.1 Interruptions in service, which are not due to the negligence of, or noncompliance with the provisions of the tariffs of the Company by, the Customer or of an authorized or Joint User, or the operation or malfunction of the facilities, power or equipment provided by the Customer, will be credited to the Customer as set forth below for the part of the service that the interruption affects.

9.1.2 A credit allowance will be made when an interruption occurs because of a failure of any component furnished by the Company under its tariffs. An interruption period begins when the Customer reports a service, facility or circuit is interrupted and releases it for testing and repair. An interruption period ends when the service, facility or circuit is operative. If the Customer reports a service, facility or circuit to be inoperative but declines to release it for testing and repair, it is considered to be impaired, but not interrupted.

9.1.3 For calculating credit allowances, every month is considered to have 30 days. A credit allowance is applied on a pro rata basis against the rates specified hereunder and is dependent upon the length of the interruption. Only those facilities on the interrupted portion of the circuit will receive a credit.

9.1.4 For Switched Access Service, no credit will be allowed for an interruption of less than 24 hours. After the first 24 hour period, a credit equal to 1/30 of the applicable recurring transport charges will be applied to each interruption which is in excess of 12 hours and Up to 24 hours.

Interruptions Over 24 Hours and Less than 72 Hours will be credited 1/5 day for each 3-hour period or fraction thereof. No more than one full day’s credit will be allowed for any period of 24 hours.

Interruptions Over 72 Hours will be credited 2 days for each full 24-Hour period. No more than 30 days credited will be allowed for any one month period.

SECTION 9 - ALLOWANCES FOR INTERRUPTIONS IN SERVICE (CONT'D)

9.2 No credit allowance will be made for:

9.2.1 interruptions due to the negligence of, or noncompliance with the provisions of the tariffs of the Company by, the Customer, User, or other common carrier providing service connected to the service of the Company;

9.2.2 interruptions due to the negligence of any person other than the Company, including but not limited to the Customer or other common carriers connected to the Company's facilities;

9.2.3 interruptions of service due to the failure or malfunction of facilities, power or equipment provided by the Customer, Authorized User, Joint User, or other common carrier providing service connected to the services or facilities of the Company;

9.2.4 interruptions of service during any period in which the Company is not given full and free access to its facilities and equipment for the purpose of investigating and correcting interruptions;

9.2.5 interruptions of service during a period in which the Customer continues to use the service on an impaired basis;

9.2.6 interruptions of service during any period when the Customer has released service to the Company for maintenance purposes or for implementation of a Customer order for a change in service arrangements;

9.2.7 interruption of service due to circumstances or causes beyond the control of the Company; and

9.2.8 interruptions of service that occur or continue due to the Customer's failure to authorize replacement of any element of special construction.

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 10 - APPLICATION OF RATES

10.1 Distance-Based Charges

10.1.1 Distance between two points is measured as airline distance between two Points of Service.

10.1.2 The airline distance between any two Points of Service is determined as follows:

A. Obtain the vertical and horizontal coordinates for each Point of Service location.

B. Compute the difference between the vertical coordinates of the two Points of Service; and compute the difference between the two horizontal coordinates.

C. Square each difference between the vertical coordinates and the horizontal coordinates.

D. Add the square of the vertical coordinates difference and the square of the horizontal coordinates difference.

E. Divide the sum of the squares by 10. Round to the next higher whole number if any fraction is obtained. For example: $\frac{(V2 - V1)^2 + (H2 - H1)^2}{10}$

F. Take the square root of the result.

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 11 - SPECIAL CONSTRUCTION AND SPECIAL ARRANGEMENTS

11.1 Special Construction

Subject to the agreement of the Company and to all of the regulations contained in the tariffs of the Company, special construction and special arrangements may be undertaken on a reasonable efforts basis at the request of the Customer. Special arrangements include any service or facility relating to a telecommunications service not otherwise specified under tariff, or for the provision of service on an expedited basis or in some other manner different from the normal tariff conditions. Special construction is that construction undertaken: (C)

11.1.1 where facilities are not presently available, and there is no other requirement for the facilities so constructed;

11.1.2 of a type other than that which the Company would normally utilize in the furnishing of its services;

11.1.3 over a route other than that which the Company would normally utilize in the furnishing of its services;

11.1.4 in a quantity greater than that which the Company would normally construct;

11.1.5 on an expedited basis;

11.1.6 on a temporary basis until permanent facilities are available;

11.1.7 involving abnormal costs; or

11.1.8 in advance of its normal construction.

11.2 Basis for Charges

Where the Company furnishes a facility or service on a special construction basis, or any service for which a rate or charge is not specified in the Company's tariffs, charges will be based on the costs incurred by the Company and may include, (1) nonrecurring type charges; (2) recurring type charges, (3) termination liabilities; or (4) combinations thereof. The agreement for special construction will ordinarily include a minimum service commitment based upon the estimated service life of the facilities provided.

11.3 Basis for Cost Computation

The costs referred to in Section 11.2 preceding may include one or more of the following items to the extent they are applicable:

11.3.1 installed costs of the facilities to be provided including estimated costs for the rearrangements of existing facilities. Installed costs include the cost of:

11.3.1.1 equipment and materials provided or used,

11.3.1.2 engineering, labor and supervision,

11.3.1.3 transportation,

11.3.1.4 rights of way, and

11.3.1.5 any other item chargeable to the capital account;

11.3.2 annual or monthly charges including the following: (C)

11.3.2.1 cost of maintenance;

11.3.2.2 depreciation on the estimated installed cost of any facilities provided, based on the anticipated useful service life of the facilities with an appropriate allowance for the estimated net salvage;

11.3.2.3 administration, taxes and uncollectible revenue on the basis of reasonable average costs for these items;

11.3.2.4 any other identifiable costs related to the facilities provided; and

11.3.2.5 an amount for return and contingencies.

11.4 Termination Liability

To the extent that there is no other requirement for use by the Company, the Customer may have a termination liability for facilities specially constructed at the request of the customer, if and only if such liability is clearly stated in a written agreement between the Company and the Customer.

11.4.1 The maximum termination liability is equal to the total cost of the special facility as determined under 11.3, preceding, adjusted to reflect the redetermined estimate net salvage, including any reuse of the facilities provided.

11.4.2 The maximum termination liability as determined in paragraph (1) shall be divided by the original term of service contracted for by the Customer (rounded up to the next whole number of months) to determine the monthly liability. The Customer's termination liability shall be equal to this monthly amount multiplied by the remaining unexpired term of service (rounded up to the next whole number of months), discounted to present value at six percent (6%), plus applicable taxes.

SECTION 12 – ORDERING OPTIONS FOR SWITCHED ACCESS SERVICE

12.1 General

This section sets forth the regulations and related charges for ordering Switched Access Service, as defined in this tariff. These charges are in addition to other applicable charges set forth in other sections of this tariff.

12.1.1 Ordering Conditions:

Except for Tandem Connect Service (as defined in Section 14.2.3.3), all services offered under this tariff will be ordered using an ASR.

12.1.1.1 ASR Orders. The format of the ASR will be as specified in the industry Access Service Order Guidelines, unless otherwise specified herein. A Customer may order any number of Services of the same type and between the same Premises on a single ASR. All details for services for a particular order must be identical.

The Customer shall provide all information necessary for the Company to provide and bill for the requesting service. When placing an order for Switched Access Service, the Customer shall provide the following minimum information:

a. Customer name and Premise(s) address(es);
b. Billing name and address (when different from Customer name and address);
c. Customer contact name(s) and telephone numbers for the following provisioning activities; order negotiating, order confirmation, interactive design, installation and billing.

The order date (Application Date) is the date on which the Company receives a firm commitment and sufficient information from the Customer to allow processing of the ASR. The Customer is advised of the critical events in the provisioning process, the Application Date, the Plant Test Date and the Service Commencement Date, at the time the Company gives the Customer a Firm Order Confirmation (FOC). The FOC is forwarded to the Customer within 2 business days after the date on which all information needed to process the ASR has been received by the Company.

12.1.1.2 Third-Party Tandem Connect Service Orders. (C)
A Customer may order Third-Party Tandem Connect service (as defined in Section 14.2.3.3) either by (1) submitting an ASR as defined in Section 12.1.1.1 or (2) routing Switched Access Service traffic to the Company, or accepting such traffic from the Company, through the switch of another entity to which the Customer is connected (the "third-party tandem provider"). Where the Customer orders Third-Party Tandem Connect service via option (2), the Company may use information provided to the Company by the third-party tandem provider or information obtained from other sources to bill the Customer for the services provided.. (C)

SECTION 12 - ORDERING OPTIONS FOR SWITCHED ACCESS SERVICE (CONT'D)

12.1.2 Provision of Other Services

Unless otherwise specified herein, all services offered under this tariff shall be ordered with an ASR.

With the agreement of the Company, other services may subsequently be added to the ASR at any time, up to and including the service date for the Access Service. When added subsequently, charges for a Design Change as set forth in Section 14.1.3.2 will apply when an engineering review is required.

Additional Engineering is not an ordering option, but will be applied to an ASR when the Company determines that Additional Engineering is necessary to accommodate a Customer request, Additional Engineering will be provided by the Company at the request of the Customer only when a Customer requests additional technical information after the Company has already provided the technical information included on the Design Layout Report as set forth herein. The Customer will be notified when Additional Engineering is required, and will be furnished with a written statement setting forth the justification for the Additional Engineering as well as an estimate of the charges. If the Customer does not want the service or facilities after being notified by the Company that Additional Engineering is required, the customer may cancel the order and no charges will apply.

12.2 Access Order

Unless otherwise specified herein, an ASR is required by the Company to provide a Customer Switched Access Service, as described herein. An ASR will be required for each new similar service arrangement or group of common circuits.

When a customer requests new or additional Switched Access Service, one or more ASR's may be required. The number of orders required is dependent on the type of services and/or facilities being requested.

When placing an order for either Local Connect Service or Third-Party Tandem Connect Service (in those cases where such service is ordered via an ASR), as described in Sections 14.2.3.2 and 14.2.3.3, respectively, the Customer shall provide all standard ASR ordering information as specified in industry guidelines. The Customer will also be required to provide this information to order additional service for an existing service type. For new Customers ordering Third-Party Tandem Connect Service by means of an ASR, the Customer will only be required to complete an ASR for installation of new service. (C)
(C)

SECTION 12 - ORDERING OPTIONS FOR SWITCHED ACCESS SERVICE (CONT'D)

12.2.1 Access Service Date Intervals. Access Service is provided with one of the following Service Date intervals:

- Standard Interval
- Negotiated Interval

The Company will specify a FOC and the Service Commencement Date contingent on the ASR being complete as received. To the extent the Access Service can be made available with reasonable effort, the Company will provide the Access Service in accordance with the Customer's required interval, subject to the following conditions:

12.2.1.1 Standard Interval: Except for Third-Party Tandem Connect Service ordered under option (2) of Section 12.1.1.2, the Standard Interval for Switched and Special Access Service will be 10 business days from the date the ASR is submitted to the Company. This interval only applies to standard service offerings for a Customer which is On-Net and at locations where there are pre-existing facilities to the Customer premises. Access Services provided under the Standard Interval will be installed during Company business hours. For Third-Party Tandem Connect Service ordered under option (2) of Section 12.1.1.2, the Standard Interval will be the same day as the service is ordered. (C) (C)

12.2.1.2 Negotiated Interval: The Company will negotiate a Service Date Interval with the Customer when:

1) The Customer requests a Service Date before or beyond the applicable Standard Interval Service Date; or

2) There is no existing facility connecting the Customer Premises with the Company or

3) The Customer requests a service that is not considered by the Company to be a standard service offering (for example, if Additional Engineering is required to complete the order; or

4) The Company determines that Access Service cannot be installed within the Standard Interval.

The Company will offer a Service Date based on the type and quantity of Access Services the Customer has required. The Negotiated Interval may not exceed by more than six months the Standard Interval Service Date, or, when there is no Standard Interval, the Company offered Service Date. All services for which rates are applied on an Individual Case Basis are provided with a Negotiated Interval.

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 12 - ORDERING OPTIONS FOR SWITCHED ACCESS SERVICE (CONT'D)

12.2.2 Access Service Request Modifications: The Customer may request a modification of its ASR prior to the Service Commencement Date. All modifications must be in writing using the industry ASR process. The Company, in its sole discretion may accept a verbal modification from the Customer. The Company will make every effort to accommodate a requested modification when it is able to do so with the normal work force assigned to complete such an order within normal business hours. Charges for access service order modification will apply as set forth below, on a per occurrence basis.

Any increase in the number of Special Channels, Switched Access Service lines, trunks, transport facilities, Out of Band Signaling connections or any change in engineering or functionality of a service will be treated as a new ASR with a new Service Date Interval.

12.2.2.1 Service Commencement Date Charges:

ASR service dates for the installation of new services or rearrangement of existing services may be changed, but the new service date may not exceed the original Service Commencement Date by more than 30 calendar days. Then, for any reason, the Customer indicates that service cannot be accepted for a period not to exceed 30 calendar days, and the Company accordingly delays the start of service, a Service Change Charge will apply. In addition, when the Customer submits a request for a Service Date Change that is less than five business days from the date of notification by the Customer, a Service Date Charge and an Expedite Charge will apply. No Expedite Charge will apply if the Customer requests a Service Date Change that is more than 5 business days from the date of request by the Customer but earlier than the original requested Service Commencement Date.

If the Customer requested service date is more than 30 calendar days after the original service date, the order will be canceled by the Company on the 31st day. Appropriate cancellation charges will be applied. If the Customer still requires the service, the Customer must place a new ASR with the Company. The Service Date Change charge will apply on a per order, per occurrence basis for each service date changed. The applicable charges are set forth in Section 15.1.3.2.

12.2.2.2 Design Change Charge:

The Customer may request a Design Change to the service ordered. A Design Change is any change to an ASR which requires Engineering Review. An Engineering Review is a review by Company personnel of the service ordered and requested changes to determine what change(s) in design, if any, are necessary to meet the Customer's request. Design Changes include such changes as the addition or deletion of optional features or functions, a change in the type of Transport Termination or type of Channel interface. Any other changes are not considered Design Changes for purposes of this subsection and will require issuance of a new ASR and the cancellation of the original ASR with appropriate cancellation charges applied.

The Design Change Charge will apply on a per order, per occurrence basis for each order requiring a Design Change. The applicable charges, as set forth in Section 15.1.3.2 are in addition to any Service Date Change Charges that may apply.

12.2.2.3 Expedited Order Charge:

When placing an Access Order for service(s) for which a Standard Interval exists, a Customer may request a Service Commencement date that is earlier than the Standard Interval Service Date, in which case an Expedite Charge will apply. The Expedite Charge will not apply if the new Service Commencement Date is more than five days from the date of the request to the Company of the Expedited Order request. However, if upon reviewing availability of equipment and scheduled work load, Company agrees to provide service on an expedited basis and Customer accepts Company's proposal, an Expedite Charge will apply. If the Company is subsequently unable to meet an agreed upon expedited service date, then the Expedited Charge will not apply.

In the event the Company provides service on a expedited basis on the Customer's request, and the Customer delays service or is not ready for delivery of service at the time of installation, a Service Date Change Charge will apply in addition to the Expedite Charge

In the event that the Customer cancels an expedite request, the Expedite Charge will be added to any applicable Cancellation Charge specified herein

In the event that the Customer requests a Service Date Change after the Company has received the original expedite request, the Expedite Charge will still apply.

An Expedite Charge will not be applied to orders expedited for Company reasons.

If costs other than additional administrative expenses are to be incurred when the Access Order is expedited, the regulations and charges for Special Construction as set forth in this tariff will apply.

The Expedited Order Charge will apply on a per order, per occurrence basis, as specified in Section 15.1.3.2.

12.2.3 Cancellation of an Access Service Request:

A Customer may cancel an ASR for the installation of Switching Access Service at any time prior to notification by the Company that service is available for the Customer's use. The cancellation date is the date the Company receives written or verbal notice from the Customer that the order is to be canceled. The verbal notice must be followed by written confirmation within 10 days. A customer may negotiate an extension of the service date of an ASR for installation of new service or rearrangement of existing service, in which case a Service Date Change Charge will apply. However, the new service date cannot exceed the originally established service date by more than 30 calendar days. On the 31st day beyond the original service date, the ASR will be canceled and the appropriate Cancellation Charge will be applied

Except as stated herein, Cancellation Charges will apply as specified in Section 15.1.3.3.

If the cancellation occurs prior to the Company's receiving the ASR, no charges shall apply.

Cancellation Charges for Expedited Orders will be applied for any order canceled from the Application Date forward.

If the Company misses a service date for a Standard or Negotiated Interval Access Order by more than 30 days due to circumstances such as acts of God, governmental requirements, work stoppages and civil disturbances, the Company shall not be liable for such delay and the Customer may cancel the ASR without incurring cancellation charges.

12.2.4 Minimum Period of Service.

The minimum period for which Third-Party Tandem Connect Service is provided and for which charges are applicable is one month. (C)

12.2.4.1 The following changes will be treated as a discontinuance of the existing service and a request for installation of a new service. All associated Non-Recurring Charges will apply for the new service, and a new minimum period will be established:

(1) A change in the identity of the Customer of record;
(2) A move by the Customer to a different building;
(3) A change in type of service;
(4) A change in Switched Access Service Interface (i.e., DSL or DS3);
(5) A change in Switched Access Service Traffic Type;

12.2.4.2 When Access Service is disconnected prior to the expiration of the minimum period, charges are applicable for the balance of the minimum period. The Minimum Period Charge for monthly billed services will be determined as follows:

For Switched Access Service, the charge for a month or fraction thereof is the applicable minimum monthly charge for the capacity made available to the Customer.

All applicable Non-Recurring Charges for the service will be billed in addition to the Minimum Period Charge.

SECTION 13 – CARRIER COMMON LINE SERVICE

The Company will provide Carrier Common Line Access Service (Carrier Common Line Access) to customers in conjunction with Switched Access Service provided in Section 14 of this Tariff. Carrier Common Line Access Service will not apply where the Company provides Toll Free Inter-Exchange Delivery Service. [C] [C] [C]

13.1 General Description

Carrier Common Line Access provides for the use of end users' Company provided common line by Customers for access to such End Users to furnish Communications Services.

13.2 Limitations

13.2.1 Exclusions

Neither a telephone number nor detail billing are provided with Carrier Common Line Access. Additionally, directory listings and intercept arrangements are not included in the rates and charges for Carrier Common Line Access.

13.2.2 Access Groups

All trunk side connections provided in the same access group will be limited to the same features and operating characteristics.

13.3 Undertaking of the Company

13.3.1 Provision of Service

Where the Customer is provided Switched Access Service under other sections of this Tariff, the Company will provide the use of Company common lines by a Customer for access to End Users at rates and charges as set forth in 15.1.3 following.

13.3.2 Interstate and Intrastate Use

The Switched Access Service provided by the Company includes the Switched Access Service provided for both interstate and intrastate communications. The Carrier Common Line Access rates and charges as set forth in 15.1.3.4.2 following apply to intrastate Switched Access Service access minutes when the Company provides common line service with other Switched Access Services. [C] [C]

Issued By: William P. Hunt, III, Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 13 – CARRIER COMMON LINE SERVICE (CONT'D)

13.4 Obligations of the Customer

13.4.1 Switched Access Service Requirements

The Switched Access Service associated with Carrier Common Line Access shall be ordered by the customer under other sections of this Tariff.

13.4.2 Reserved (C)

13.5 Determination of Usage Subject to Carrier Common Line Access Charges

Except as set forth herein, all Switched Access Service provided to the customer will be subject to Carrier Common Line Access service.

13.5.1 Determination of Jurisdiction

When the customer reports interstate and intrastate use of Switched Access Service, the associated Carrier Common Line Access used by the customer for interstate will be determined as set forth in 3.4.1 (Percent Interstate Use – PIU).

13.6 Measuring and Recording of Call Detail

When access minutes are used to determine Carrier Common Line charges, they will be accumulated using call detail recorded by Company equipment. The Company measuring and recording equipment will be associated with end office or local tandem switching equipment and will record each originating and terminating access minute where answer supervision is received. The accumulated access minutes will be summed on a line by line basis, by line group or by end office, whichever type of account is used by the Company, for each customer and then rounded to the nearest minute.

SECTION 13 – CARRIER COMMON LINE SERVICE (CONT'D)

13.7 Billing of Charges

13.7.1 Access minutes for all Switched Access Service subject to Carrier Common Line charges will be multiplied by the Access per minute rate as set forth in Section 15.1.3.4.2 following.

13.8 Determination of Charges

13.8.1 Carrier Common Line charges will be billed to each Switched Access Service provided further under this Tariff, in accordance with the rates as set forth in Section 15.1.3.4 following.

13.8.2 Carrier Common Line Access per minute charge (s) apply to:

A. all terminating access minutes of use.

B. less those terminating access minutes of use associated with Mobile Telephone Switching Offices (MTSOs).

C. All originating access minutes of use associated with calls placed to 700, 800 and 900 numbers, less those originating access minutes of use associated with calls placed to 700, 800 and 900 numbers for which the Customer furnishes for each month a report of either the number of calls or minutes or a report of the percent of calls or minutes that terminate in a Switched Access Service that is assessed Carrier Common Line charges.

When the Customer makes this report available to the Company in advance of billing, these minutes of use will be charged on the current bill as originating minutes of use as set forth in (D) following. If a billing dispute arises concerning the Customer provided report, the Company will request the Customer to provide the data the Customer used to develop the report. The Company will not request such data more than once a year. The Customer shall supply the data within 30 days of the Telephone Company request.

When this report is not available to the Company until after billing, it shall be used by the Company to calculate and post a credit to the Customer's account. The credit shall be posted to the Customer's account within 30 days of receipt of the report. The credit shall be calculated by multiplying the number of access minutes of use, for which a credit is determined to be applicable, times the difference between the terminating and originating Carrier Common Line charges in effect when the calls were completed.

D. The originating Access, per minute charge(s) apply to: (C)

-- all originating access minutes of use,

-- all originating access minutes of use where the off-hook supervisory signaling is forwarded by the customer's equipment when the called party answers,

-- less all originating access minutes of use associated with calls placed to 700, 800 and 900 numbers,

-- less those originating access minutes of use associated with Mobile Telephone Switching Offices (MTSOs),

-- plus all originating access minutes of use associated with calls placed to 700, 800 and 900 numbers for which the Customer furnishes for each month a report of either the number of calls or minutes or a report of the percent of calls or minutes that term mate in a Switched Access Service that is assessed Carrier Common Line charges, and for which a corresponding reduction in the number of terminating access minutes of use has been made as set forth in (C) preceding.

13.9 Supervision

Where a Company switch serves the end user, the Company shall provide the necessary on-hook and off-hook supervision. (C)

SECTION 14 - SWITCHED ACCESS SERVICE

14.1 General

Switched Access Service, which is available to Customers for their use in furnishing their services to End Users, provides a communications path between a Customer's Premises and a service obtained by an End User from the Company or (if the Switched Access Service is provided by more than one local exchange carrier as provided in Section 4.2.9 of this Tariff) from another carrier whose network subtends the Company's facilities. It provides for the use of common terminating, switching and transport facilities. Switched Access Service provides the ability to originate calls from an End User's service to a Customer's Premises, and to terminate calls from a Customer's Premises to an End User's service. (C)

Rates and charges are set forth in Section 15. The application of rates for Switched Access Service is described in Section 15.1.3.4.

14.2 Provision and Description of Switched Access Service Agreements

Switched Access Service is provided in the following service type:

14.2.1 Feature Group D (FGD) Access

FGD Access, which is available to all customers, is provisioned at the DSI level and provides trunk-side access to Company switches with an associated uniform 101-XXXX Access Code for Customer's use in originating and terminating communications. FGD service will be provided with SS7 signaling. (Multi-Frequency In-Band signaling may also be available, for a separate charge established under Section 11 of this Tariff.) End Users of Customer's service may also originate calls to certain FGD Access Customers without dialing the 101-XXXX Access Code if End User is presubscribed, as described herein. (C)

The Access Code for FGD switching is a uniform Access Code of the form 10XXX. A single Access Code will be the assigned number of all FGD access provided to the Customer by the Company. No Access Code is required for calls to a customer over FGD Switched Access Service if the End User's telephone exchange service is arranged for Presubscription to that Customer, as set forth herein

Where no Access Code is required, the number dialed by the Customer's End User shall be a seven or ten digit number for calls in the North American Numbering Plan (NANP), except for 00- dialed calls which are routed to the predesignated Customer. For international calls outside the NANP, a seven to twelve digit number maybe dialed. The form of the numbers dialed by the Customer's End User is NXX-XXXX, 0 or 1 + NXX-XXXX, NPA + NXX-XXXX, 0 or 1 + NPA = NXX-XXXX, and when the local Switching Center is equipped for International Direct Distance Dialing (IDDD), O+ CC + NN or 011 + CC + NN.

SECTION 14 - SWITCHED ACCESS SERVICE (CONT'D)

When the 10XXX Access Code is used, FGD switching also provides for dialing the digit 0 for access to the Customer's operator, 911 for access to the Company's emergency service, or the end-of-dialing digit (#) for cut-through access to the Customer's Premises.

In addition, End Users may originate calls by dialing the 950-XXXX Access Code specific to a particular Interexchange Carrier, provided that the Interexchange Carrier has subscribed to the Company's Feature Group D with 950 Access Common Switching Optional Feature. If the End User is presubscribed to that Interexchange Carrier, no Access Code is necessary.

14.2.2 Manner of Provision

Trunks used for Switched Access Service may be configured for one-way (either originating only or terminating only) or for two-way directionality. It is the Customer's responsibility to order a sufficient number of trunks of each type in order to meet its desired grade of service objective. At the Customer's request, the Company will assist the Customer in sizing Switched Access Trunk groups.

14.2.3 Rate Categories

14.2.3.1 The following serving arrangements may apply to Switched Access Service, depending on which the Customer uses: (C)

A. Local Connect
B. Tandem Connect
C. Third-Party Tandem Connect

14.2.3.1.1 **Local Connect Switched Access Service.**

Local Connect Switched Access Service is service in which the End User is served by the Company, and the Customer connects with the Company at a point of interconnection located within the same local access and transport area in which the End User obtains its service from the Company. Unless the Customer chooses to provide its own facilities for connection, the Company will provide a connection (subject to the availability of facilities, as specified in Application of Tariff and Special Construction, above) between the Customer's Premises and the relevant Company switch in the same local access and transport area. This transmission path will be dedicated to the use of a single Customer. Customer may specify a DS3 or DS1 connection. Higher or lower data rates may be available on a Special Construction basis as provided in Section 11 of this Tariff.

Local Connect Switched Access Service is comprised of: (i) charges for Entrance Facilities/Direct Trunked Transport and DS1 Switch Ports (at the customer side of the end office switch); (ii) if applicable, a charge for multiplexing traffic from one data rate to another; (iii) a per-minute local switching charge; (iv) a per-minute carrier common line charge; and (v) where applicable, a toll-free database query charge (for outbound toll-free calls where Level 3 provides the query function). These charges are set out in Section 15 of this Tariff. (C)

SECTION 14 - SWITCHED ACCESS SERVICE (CONT'D)

14.2.3.1.2 **Tandem Connect Switched Access Service** (C)

Tandem Connect Switched Access Service is service in which either (a) the End User is served by a third party whose network subtends the Company's network; and/or (b) the Customer physically connects with the Company at a point of interconnection located in a local access and transport area other than the one in which the End User obtains its service. Unless the Customer chooses to provide its own facilities for connection, the Company will provide a connection (subject to the availability of facilities, as specified in Application of Tariff and Section 11, above) between the Customer's Premises and a Company point of interconnection within the state of Pennsylvania. In determining the rate for an arrangement provided under Section 11, the Company will treat the distance component of any transport provided as capped at 10 miles. This transmission path will be dedicated to the use of a single Customer. Customer may specify a DS3 or DS1 connection. Higher or lower data rates may be available on a Special Construction basis as provided in Section 11 of this Tariff.

Access to Tandem Connect Switched Access Service is provided in the local access and transport areas in which the Company has tandem equipment. A connection from a Customer's network to any Company tandem location will provide connectivity to all Company end offices nationwide and all third-party End Offices that subtend any Company tandem, nationwide. The Company will provide Customers a list of its Tandem locations upon request, including a list of the Company and third-party End Offices that subtend each tandem.

Tandem Connect Switched Access Service is comprised of: (i) charges for Entrance Facilities/Direct Trunked Transport and DS1 Switch Ports (at the customer side of the tandem switch); (ii) if applicable, a charge for multiplexing traffic from one data rate to another; (iii) a per-minute tandem switching charge; and (iv) a per-minute tandem switched transport charge (capped at 10 miles of transport between the tandem switch and the end office switch); These charges are set out in Section 15 of this Tariff. These charges are in addition to any applicable end office charges from the Company, as set out in Section 14.2.3.1, or the third-party network whose end office subtends the Company's tandem, as the case may be. If a third party that subtends the Company's network serves the End User, then billing by the Company and the third party shall be as specified in 4.2.9 above.

Where a Customer obtains Tandem Connect Switched Access Service, calls to and from Company NPA-NXXs located in the same local access and transport area in which the Customer connects to the Company's network shall be rated as Local Connect Switched Access Service, irrespective of whether such service is separately ordered for such NPA-NXXs.

When a customer has established a connection to the Company's network in order to obtain Tandem Connect Switched Access Service, the customer may use the same connection facilities to deliver to the Company any switched access traffic (interstate or intrastate) bound for the Company from the customer. The rates applicable to the termination of all such traffic shall be determined by the traffic terms that apply to such traffic. (C)

SECTION 14 - SWITCHED ACCESS SERVICE (CONT'D)

(C)

14.2.3.1.3 Third-Party Tandem Connect Switched Access Service is provided in conjunction with a third-party provider of tandem switching in cases where the Company's Switch serving the End User subtends such third-party tandem switch. Third Party Connect Switched Access Service consists of circuits from the point of interconnection with Customer's third-party tandem provider to the Company's End Office Switch. This Third Party Tandem Connect rate category is comprised of a Minutes of Use (MOU) based End-Office switching and tandem switched transport charges. Charges are computed in accordance with Section 4.2.9 preceding (Ordering, Rating, and Billing of Access Services Where More Than One Local Exchange Carrier is Involved). Subject to and as specified there, with Third Party Tandem Connect Switched Access Service, Customer will pay Company for End Office switching and port charges, and carrier common line charges, as set forth in Section 15 and, typically, an appropriate portion of transport mileage as set out in Section 15. Third-Party Tandem Connect Switched Access Service is available only with respect to (a) Company End Office switches that subtend a third party's tandem switch, and (b) on an incidental and transitional basis, Company End Offices that subtend a Company tandem, but where physical connections exist that permit the delivery of incidental traffic to the Company's End Office switch via the third party tandem switch.

The Company will provide, upon request, an identification of the tandem switch (Company or third party) that each of its End Offices subtends. The Company will also reflect the tandems that each of its End Offices subtends in the Local Exchange Routing Guide or successor industry document.

(C)

SECTION 14 – SWITCHED ACCESS SERVICE (CONT'D) (C)

14.2.3.2 **Entrance Facility/Direct Trunked Transport.**

Local Connect and Tandem Connect arrangements require the establishment of a connection between the Customer's premises and the relevant Company switch(es). Such connection is established using an Entrance Facility/Direct Trunked Transport arrangement as described in this section.

14.2.3.2.1 **Entrance Facility/Direct Trunked Transport**. An Entrance Facility/Direct Trunked Transport element provides the communication path for the sole use of the Customer between a Customer's Premises in a local access and transport area and a Telephone Company switch that is used to provide switched access services to the Customer. As described in Section 15 of this Tariff, the Entrance Facility/Direct Trunked Transport element consists of a fixed monthly charge and a charge per mile per month, with mileage measured from the Customer's Premises to the relevant Telephone Company switch. This arrangement is required whether the Customer's Premises and relevant Telephone Company switch are located in the same or different buildings (although where they are in the same building a zero mileage rate would apply). Where facilities are available at the time of a Customer order, the Company will provide the Entrance Facility/Direct Trunked Transport at the rates specified in Sections 15, following. Where facilities are not available at the time of a Customer order, the Customer may self-provision a connection from its Premises to the applicable Company point of interconnection, or the Company may provide the Entrance Facility on a Special Construction basis as specified in Section 11, preceding.

If a Customer has no Premises or facilities in the local access and transport area where a Company switch is located to which the Customer seeks to connect, the Company will arrange for transport from a mutually agreeable location in the local access and transport area where the Customer has Premises or facilities to the local access and transport area where the relevant Company switch is located. Due to the variability of possible arrangements affected by this provision, the rate(s) applicable to any such arrangement will be developed on an individual basis in accordance with the provisions of Section 11 of this Tariff. In determining the rate for an arrangement provided under Section 11, the Company will treat the distance component of any transport provided as capped at 10 miles.

14.2.3.2.2 **Multiplexing.** The Company's switches use DS1 ports. A Customer may choose to deliver traffic to or receive traffic from the Company at the DS3 level, in which case multiplexing charges will apply as set forth in Section 15, following.

14.2.3.2.3 **Switch Port.** An Entrance Facility/Direct Trunked Transport arrangement will terminate in one or more DS1 ports on the relevant Company switch. Charges for these ports will apply as set forth in Section 15, following. (C)

SECTION 14 – SWITCHED ACCESS SERVICE (CONT'D)

(C)

(C)

14.2.4 Design Layout Report:

At the request of the Customer, the Company will provide to the Customer the makeup of the facilities and services provided from the Customer's Premises to the first point of switching. This information will be provided in the form of a Design Layout Report. The Design Layout Report will be provided to the Customer at no charge.

14.2.5 Acceptance Testing:

At no additional charge, the Company will, at the Customer's request, cooperatively test, at the time of installation, the following parameters: loss, C-notched noise, C-message noise, 3-tons slope, d.c. continuity and operational signaling.

14.2.6 Ordering Options and Conditions:

Switched Access Service is ordered under the Access Order provisions set forth in Section 12.. Also included in that section are other charges which may be associated with ordering Switched Access Service.

SECTION 14 – SWITCHED ACCESS SERVICE (CONT'D)

14.2.7 Competitive Pricing Arrangements:

Competitive pricing arrangements for Local Transport - Entrance Facilities and Local Transport-Direct Trunked Transport can be furnished to meet the communications needs of specific Customers on a case by case basis under individual contracts.

14.2.8 Determination of Charges

(A) Except as set forth in 14.2.8(B) below, and subject to Section 14.2.3 above, the Originating Access, per minute charge(s) apply to: (C)

1. all Originating Access minutes of use, associated with calls placed to 700 numbers, Toll Free 8YY and 900 numbers for which the Customer furnishes service.

2. all Originating Access minutes of use where the off-hook supervisory signaling is forwarded by the customer's equipment when the called party answers.

(B) **Exception:** Subject to Section 14.2.3, the following are exempted from the application of the originating access charge elements of Carrier Common Line, Local End Office Switching, End Office Port, Switched Transport Usage, Tandem Switched Transport – Facility and Switched Termination. (C)

1. all Originating Access minutes of use associated with calls placed to 700 numbers, Toll Free 8YY and 900 numbers where such traffic utilizes the Toll Free Inter-Exchange Delivery Service in Section 14.2.9(B).

2. all Originating Access minutes of use originating from a wireless carrier's Mobile Telephone Switching Offices (MTSOs), including any MTSO owned by the Company.

SECTION 14 – SWITCHED ACCESS SERVICE (CONT'D)

14.2.9 Other Rate Categories

(A) Toll Free Data Base Access Service

Toll Free Data Base Access Service is a service offering utilizing originating trunk side Switched Access Service to deliver Toll Free calls to the Company's Interexchange Carrier Customers. The service provides for the forwarding of end user dialed Toll Free calls to a Company Service Switching Point which will initiate a query to the database to perform the Customer identification and delivery function. The call is forwarded to the appropriate Interexchange Carrier Customer based on the dialed Toll-Free number. Records exchange, rating and billing for Toll Free Data Base Access Service is subject to the provisions of the Multiple Exchange Carrier Access Billing Guidelines (MECAB).

(1) Customer Identification Charge

The Toll Free Data Base Access Service Customer Identification Charge applies for the identification of the appropriate Interexchange Carrier Customer. The charge is assessed to the Customer on a per query basis and may include an area of service which may range from a single NPA/NXX to an area consisting of all LATAs and NPAs in the Commonwealth of Pennsylvania. The per query Customer Identification Charge is set forth in Section 15.1.3.6.

(2) Customer Delivery Charge

The Toll Free Data Base Access Service Delivery Charge applies for the delivery of the dialed Toll-Free ten-digit number. The charge is assessed to the Interexchange Carrier Customer on a per query basis and may include an area of service which may range from a single NPA/NXX to an area consisting of all LATAs and NPAs in the Commonwealth of Pennsylvania. The per query Customer Delivery Charge is set forth in Section 15.1.3.6.

(B) Toll Free Inter-Exchange Delivery Service

Toll Free Inter-Exchange Delivery Service is an access service in which the Company transports Toll Free traffic originated by a third party who is not an end user or other user of the Company's local exchange or exchange access service through its wire center to an Interexchange Carrier Customer. It provides for the use of Tandem Switching, Tandem Termination, and Tandem Transport facilities of the Company. In a Toll Free Inter-Exchange Delivery Service call, the Company will not charge Carrier Common Line, Local End Office Switching, or End Office Port charges. The rates for Toll Free Inter-Exchange Delivery Service ser forth in Section 15.1.3.7 are usage sensitive. Records exchange, rating, and billing for Toll Free Inter-Exchange Delivery Service is subject to the provisions of the Multiple Exchange Carrier Access Billing Guidelines (MECAB).

Issued By: William P. Hunt, III, Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 14 – SWITCHED ACCESS SERVICE (CONT'D)

14.2.9 Other Rate Categories (cont'd)

(C) Pay Telephone Compensation
When a Toll Free number is dialed from a payphone and carried over the Company's facilities to an Interexchange Carrier Customer, the Interexchange Carrier Customer, or a successive carrier, may be responsible for compensating the Pay Telephone Service Provider ("PSP") in accordance with the rules prescribed by the Federal Communications Commission ("FCC"). If the Interexchange Carrier Customer is not capable of reporting and/or remitting Pay Telephone Compensation as prescribed by the FCC, it may contract with the Company to provide that service for an additional fee. Unless the Interexchange Carrier requests such service, no Pay Telephone Compensation charge will be assessed by the Company to the Interexchange Carrier.

14.3 Obligations of Company
In addition to the obligations of the Company set forth in other sections of this tariff. The Company has certain other obligations concerning the provision of Switched Access Service. These obligations are as follows:

14.3.1 Network Management
The Company will administer its Network to ensure the provision of acceptable service levels to all telecommunications users of the Company's Network Services.

Service levels are considered acceptable only when both End Users and Customers are able to establish connections with little or no delay encountered within the Company Network. Company reserves the right to apply protective controls, (i.e., those actions, such as call gapping, which selectively cancel the completion of traffic), over any traffic carried over its Network, including that associated with a Customer's Switched Access Service. Generally, such protective measures would only be taken as a result of occurrences such as failure or overload of Company or Customer facilities, natural disasters, mass calling or national security demands. Customer will notify Company of anticipated peaked services as stated below. Based on the information provided Company will work cooperatively with Customer to determine the appropriate level of control. In the event that the protective controls applied by Company result in the complete loss of service by Customer, Customer will be granted a credit allowance for service interruption as set forth in Section 9.

14.3.2 Supervisory Signaling (C)
In cases where the end user is served by a Company switch, the Company's equipment |
shall provide the necessary On-Hook, Off-Hook answer and disconnect supervision. (C)

SECTION 14 – SWITCHED ACCESS SERVICE (CONT'D)

When a Customer uses the Company's facilities to offer services for which a substantial call volume or peaked service is expected during a short period of time, the Customer must notify the Company at least 24 hours in advance of each peak period. For events scheduled during weekends or holidays, the Company must be notified no later than 5:00 p.m. local time the prior business day. Notification should include the nature, time, duration, and frequency of the event, an estimated call volume, and the NPA NXX and line number(s) to be used. On the basis of the information provided, the Company may invoke network management controls if required to reduce the probability of excessive Network congestion. The Company will work cooperatively with the Customer to determine the appropriate level of such control. Failure to provide prescribed notification may result in Customer caused Network congestion which could result in discontinuance of service under Section 4.5.2.

14.4 Obligations of the Customer

In addition to obligations specified elsewhere in this tariff, the Customer has certain specific obligations pertaining to the use of Switched Access Service, as follows:

14.4.1 Report Requirements:

When a Customer orders Switched Access Service for both interstate and intrastate use, the Customer is responsible for providing Jurisdictional Reports as set forth in Section 3.4 preceding. Charges will be apportioned in accordance with those reports. The method for determining the intrastate charges is set forth therein (Section 3.4).

14.4.2 [reserved] (C)

Issued By: Thomas C. Stortz, Group Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 14 – SWITCHED ACCESS SERVICE (CONT'D)

14.4.3 Design of Switched Access Services:

It is the Customer's responsibility to assure that sufficient Access Services have been ordered to handle its traffic.

Issued By: Thomas C. Stortz, Group Vice President and General Counsel
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 15 – RATES AND CHARGES

15.1 Rates for Switched Access Services

There are three types of rates and charges that apply to Switched Access Service. These are Monthly Recurring Charges, Usage Rates and Non-Recurring Charges.

Monthly Recurring Charges: Monthly Recurring Charges are flat rates for facilities that apply each month or fraction thereof that a specific rate element is provided.

Usage Rates: Usage Rates are rates that are applied on a per access minute or per query basis. Usage rates are accumulated over a monthly period.

Non-Recurring Charges: Non-Recurring Charges are one time charges that apply for a specific work activity (i.e., installation of new service or change to an existing service).

(a) Installation of Service: Non-Recurring Charges apply to each Switched Access Service installed. The charge is applied per line or trunk.

15.1.1 Application of Rates

15.1.1.1 Local Connect: (C)

The rates that apply for Local Connect Switched Access Service are: (i) charges for Entrance Facilities/Direct Trunked Transport (which, in the absence of a state tariffed rate for such Entrance Facilities/Direct Trunked Transport, shall be determined on a special assembly basis, as described in Section 14.2.3, preceding) and DS1 Switch Ports (at the customer side of the end office switch); (ii) if applicable, a charge for multiplexing traffic from one data rate to another; (iii) a per-minute local switching charge; (iv) a per-minute carrier common line charge; and (v) where applicable, a toll-free database query charge (for outbound toll-free calls where Level 3 provides the query function). These charges are set out in Section 15 of this Tariff.

15.1.1.2 Tandem Connect:

The rates that apply for Tandem Connect Switched Access Service are: (i) charges for Entrance Facilities/Direct Trunked Transport (which, in the absence of a state tariffed rate for such Entrance Facilities/Direct Trunked Transport, shall be determined on a special assembly basis, as described in Section 14.2.3, preceding) and DS1 Switch Ports (at the customer side of the tandem switch); (ii) if applicable, a charge for multiplexing traffic from one data rate to another; (iii) a per-minute tandem switching charge; and (iv) a per-minute tandem switched transport charge (capped at 10 miles of transport between the tandem switch and the end office switch); These charges are set out in Section 15 of this Tariff. These charges are in addition to any applicable end office charges from the Company, as set out in Section 14, or the third-party network whose end office subtends the Company's tandem, as the case may be. If a third party that subtends the Company's network serves the End User, then billing by the Company and the third party shall be as specified in 4.2.9 above.

15.1.1.3 Third-Party Tandem Connect:

The rates that apply for Third-Party Tandem Connect service are: (i) a tandem switched transport rate, as set out in section 15, determined in accordance with Section 4.2.9 of this tariff; and (ii) all applicable end office rates, as specified in Section 15.1.1.1 above (but not including entrance facility, direct trunk transport, or multiplexing charges). (C)

SECTION 15 – RATES AND CHARGES (CONT'D)

15.1.2 Billing of Access Minutes:

When recording originating calls over FGD with SS7 signaling, usage measurement begins with the transmission of the initial address message by the switch for direct Trunk groups associated with Local Connect Switched Access Service and with the receipt of an exit message by the switch for tandem Trunk groups associated with Tandem Connect Switched Access Service or Third-Party Tandem Connect Switched Access Service. The measurement of originating FGD usage ends when the entry switch receives or sends a release message, whichever occurs first. (C)

For terminating calls over FGD with SS7 signaling, the measurement of access minutes begins when the terminating recording switch receives the initial address message from the Customer's network. The Company switch receives the initial address message and sends the indication to the Customer in the form of an answer message. The measurement of termination FGD call usage ends when the entry switch receives or sends a release message, whichever occurs first. (C)

15.1.3 Rates and Charges

15.1.3.1 Service Implementation

A. Installation Charge – Per Trunk

	Non-recurring Charge
DS0-Voice Grade	$99.00
DS1	$482.00
DS3	$528.00

SECTION 15 – RATES AND CHARGES (CONT'D)

15.1.3.2 Change Charges (Per Order)

		Per Occurrence
A.	Service Date	$10.00
B.	Design Changes	$25.00
C.	Expedite Charge	$100.00

15.1.3.3 Cancellation Charges (Per Order)

$25.00

15.1.3.4 Terminating Switched Access

		Per Access Minute of Use	
15.1.3.4.1	Composite End Office Terminating Charge	$0.000700	(C)
			(D)
			(D)
			(D)
15.1.3.4.2	End Office Port Charge	$0.000000	
15.1.3.4.3	Carrier Common Line	$0.000000	

SECTION 15 – RATES AND CHARGES (CONT'D)

			Per Access Minute of Use
15.1.3.5	Originating Switched Access		
	15.1.3.5.1	Carrier Common Line	$0.000000
	15.1.3.5.2	Local End Office Switching	$0.006212
	15.1.3.5.3	End Office Port	$0.001598
15.1.3.6	Toll Free Data Base Access Service		
	Customer Identification - Per Query		$0.003089
	Customer Delivery Charge - Per Query		$0.000300
15.1.3.7	Toll Free Inter-Exchange Delivery Service		
	15.1.3.7.1	Tandem Switching	$0.000983
	15.1.3.7.2	Tandem Termination	
		Originating	$0.000195
		Terminating	$0.000000 [D]
	15.1.3.7.3	Tandem Transport per Mile	
		Originating	$0.000045
		Terminating	$0.000002 [D]

			Access Rate Per Minute
15.1.3.8	Switched Transport Usage Rates		
	15.1.3.8.1	Switched Transport	
		Terminating	$0.000000 [D]
		Originating	$0.000195
	15.1.3.8.2	Transport per Mile	
		Terminating	$0.000002 [D]
		Originating	$0.000045
	15.1.3.8.3	Transport Interconnection	
		Terminating	$0.0000
	15.1.3.8.4	Tandem Switching Charge	
		Terminating	$0.000983

Issued: May 31, 2013
Effective: July 1, 2013

Issued By: Vice President of Public Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

SECTION 15 – RATES AND CHARGES (CONT'D)

15.1.3.9 Direct-Trunked Transport

	Monthly Recurring Rate	
	Fixed	Per Mile
-DS0	$16.00	$2.50
-DS1	$46.66	$14.25
-DS3	$825.00	$155.03

15.1.3.10 Interstate Rates Applicable to VoIP-PSTN Traffic

	Per Minute of Use	
Carrier Common Line	$0.000000	
Common Trunk Port	$0.000000	
Local Switching	$0.000000	
Tandem Switched Facility	$0.000002	
Tandem Switched Termination	$0.000000	
Tandem Switching	$0.001574	
Composite End Office Charge	$0.000700	(C)
		(D)
		(D)
		(D)
		(D)

15.1.4 **Application of rates for Local Connect Switched Access Service, Tandem Connect Switched Access Service, and Third-Party Tandem Connect Switched Access Service**

15.1.4.1 – Rates Applicable To Local Connect Service

15.1.4.1.1 Entrance Facility/Direct Trunked Transport

To obtain Local Connect Service, the Customer must obtain a connection from its Premises in a local access and transport area to the Company local switch to which the Customer seeks to connect. To obtain that connection the Customer must purchase a combination of Entrance Facilities, Direct Trunked Transport, and DS1 switch ports, as well as multiplexing, if applicable.

The Direct Trunked Transport rate shall be applied per DS1-level, DS-3 level, or higher-level connection (for states in which multiple data rate options are available), at the appropriate per-month and per-mile rate(s) specified in Section 15.1.3.4.4 of this tariff. The Per Mile amounts shall be charged monthly and shall be calculated based on the distance between the Customer's premises and the Company local switch to which the Customer seeks to connect, calculated in accordance with Section 10 of this Tariff.

15.1.4.1.2 Multiplexing

The Company's network normally requires traffic delivered to its switches at the DS1 level. If a Customer chooses to obtain mutliplexing/demultiplexing services to convert DS3 to DS1 level signaling, the Customer may obtain that service from the Company at the rates stated in Section 15.1.3.4.3. These rates apply per minute of traffic multiplexed or demultipled. If multiplexing between other data rates is required, the Company may provide such services in accordance with the terms of Section 11, Special Construction.

Certain material previously appearing on this page now appears on 6th Revised Page 59.

15.1.4.1.3 Switch Ports (C)

For each DS1 port on the relevant Company local swtich, the per-minute port charge specified in Section 15.1.3.4.1of this Tariff shall apply to each originating and terminating minute of use.

15.1.4.1.4 Per-Minute End Office Rates

For each originating minute of use a Customer receives from a Company switch, the per-minute-of-use local switching charge stated in Section 15.1.3.5 shall apply. For each terminating minute of use a Customer send to a Company switch, the per-minute-of-use local switching charge stated in Section 15.1.3.4.1 shall apply. For each originating and each terminating minute of use, the per-minute-of-use port charges as specified there shall also apply as stated in Section 15.1.4.1.3., above.

15.1.4.1.5 Database Query Rates

To the extent that End Users originate toll free calls that are routed via Local Connect Service, the Company shall impose the charges stated is Section 15.1.3.6, above.

15.1.4.2 – Rates Applicable To Tandem Connect Service

15.1.4.2.1 Entrance Facility/Direct Trunked Transport

To obtain Tandem Connect Service, the Customer must obtain a connection from its Premises to a Company tandem swtich. To obtain that connection the Customer must purchase a combination of Entrance Facilities, Direct Trunked Transport, and DS1 switch ports, as well as multiplexing, if applicable, subject to Section 15.1.1, preceding. The Company will provide a Customer with a list of its tandem switch locations upon request, including a list of the Company and third-party End Offices that subtend each tandem.

Subject to Section 15.1.1, preceding, The Direct Trunked Transport rate shall be applied per DS1-level, DS-3 level, or higher-level connection (for states in which multiple data rate options are available), at the appropriate per-month and per-mile rate(s) specified in Section 15 of this tariff. The Per Mile amounts shall be charged monthly and shall be calculated based on the distance between the Customer's premises and the Company tandem switch to which the Customer seeks to connect, calculated in accordance with Section 10 of this Tariff.

15.1.4.2.2 Multiplexing

The Company's network normally requires traffic delivered to its switches at the DS1 level. If a Customer chooses to obtain mutliplexing/demultiplexing services to convert DS3 to DS1 level signaling, the Customer may obtain that service from the Company at the rates stated in Section 15.1.3.4.3. These rates apply per minute of traffic multiplexed or demultipled. If multiplexing between other data rates is required, the Company may provide such services in accordance with the terms of Section 11, Special Construction. (C)

SECTION 15 – RATES AND CHARGES (CONT'D)

15.1.4.2.3 Switch Ports (C)

For each DS1 port on the Company tandem swtich, the per-minute port charge specified in Section 15.1.3.4.1of this Tariff shall apply to each originating and terminating minute of use.

15.1.4.2.4 Per-Minute Tandem Switched Transport Rates

For each minute of use (origianting or terminating) a Customer transmits to or receives from a Company tandem switch, the per-minute-of-use (including per-minute-per-mile) rates specified in Section 15.1.3.4.3 shall apply, except as specified below:

- The charges specified in Section 15.1.3.4.3 shall not apply to any traffic bound for a Company end office switch located in the same local access and transport area as the company tandem swtich to which the Customer is connected.
- For Company or third party end office switches located in a local access and transport area different from the one where the Company tandem switch is located, the "rates per access minute per mile" shall be calculated using mileage calculated in accordance with Section 10, but with mileage capped at ten (10) miles of transport.

15.1.4.2.5 Per-Minute End Office Rates

For each originating minute of use a Customer receives from a Company switch, the per-minute-of-use local switching charge stated in Section 15.1.3.5 shall apply. For each terminating minute of use a Customer send to a Company switch, the per-minute-of-use local switching charge stated in Section 15.1.3.4.1 shall apply. For each originating and each terminating minute of use, the per-minute-of-use port charges as specified there shall also apply as stated in Section 15.1.4.2.3., above.

15.1.4.2.6 Database Query Rates

To the extent that End Users originate toll free calls that are routed via Local Connect Service, the Company shall impose the charges stated is Section 15.1.3.6, above.

15.1.4.3 Third-Party Tandem Connect:

The rates that apply for Third-Party Tandem Connect service are: (i) a tandem switched transport rate, as set out in section 15.1.3.4.3, determined in accordance with Section 4.2.9 of this tariff; and (ii) all applicable end office rates, as specified in Section 15.1.3.1, 15.1.3.2, and/or 15.1.3.5 above (but not including entrance facility, direct trunk transport, or multiplexing charges).

Charges in addition to those noted above may apply in accordance with this tariff for other services and functions provided to the Customer, including, without limitation, non-recurring charges, order processing charges, and special construction charges. In addition, as provided in this tariff, if the Company does not have facilities available to meet a Customer's specific request for service, the Company may provide such services on a special construction basis, in accordance with Section 11 of this tariff. (C)

SECTION 15 – RATES AND CHARGES (CONT'D)

15.2 Non-routine Installation/Maintenance Charges (C)

As stated in 2.9, at the Customer's request, installation and/or maintenance may be performed outside the Company's regular business hours or in hazardous locations. In that case, the following rates apply:

Basic Time - per quarter hour:	$21.44
Overtime - per quarter hour:	$28.01
Premium Time - per quarter hour:	$34.59

15.3 Individual Case Basis Arrangements

Arrangements will be developed on a case-by-case basis in response to a bona fide request from a Customer or prospective Customer to develop a competitive bid for a service offered under this tariff. Rates quoted in response to such competitive requests may be different than those specified for such service in this tariff. ICB rates will be offered to the Customer in writing. Notice of such arrangements will be provided to the Commission according to Commission rules.

15.4 Promotional And Temporary Rates

This Section 15.4 of this Tariff contains promotional and temporary rates. Each subsection of this Section 15.4 contains a specific promotional or temporary rate for a service the regular rate for which is contained in another part of this tariff. Each such subsection identifies (a) the service or services to which the promotional rate applies; (b) the promotional rate that applies to the affected service or services; (c) the first date on which the promotional rate is available; (d) the last date on which the promotional rate is available; and (e) any other relevant terms or conditions associated with taking advantage of the promotional rate.

15.4.1 Promotional Rate For Certain Installation and Non-Recurring Charges Associated With Tandem Connect Service

Non-Recurring Charges and Installation charges for the following Fixed Elements will be waived for Facilities installed between 04/15/11 and 08/31/11, provided that Special Construction is not needed to deliver those Facilities

Entrance Facility
Direct Trunked Transport
Port Charge

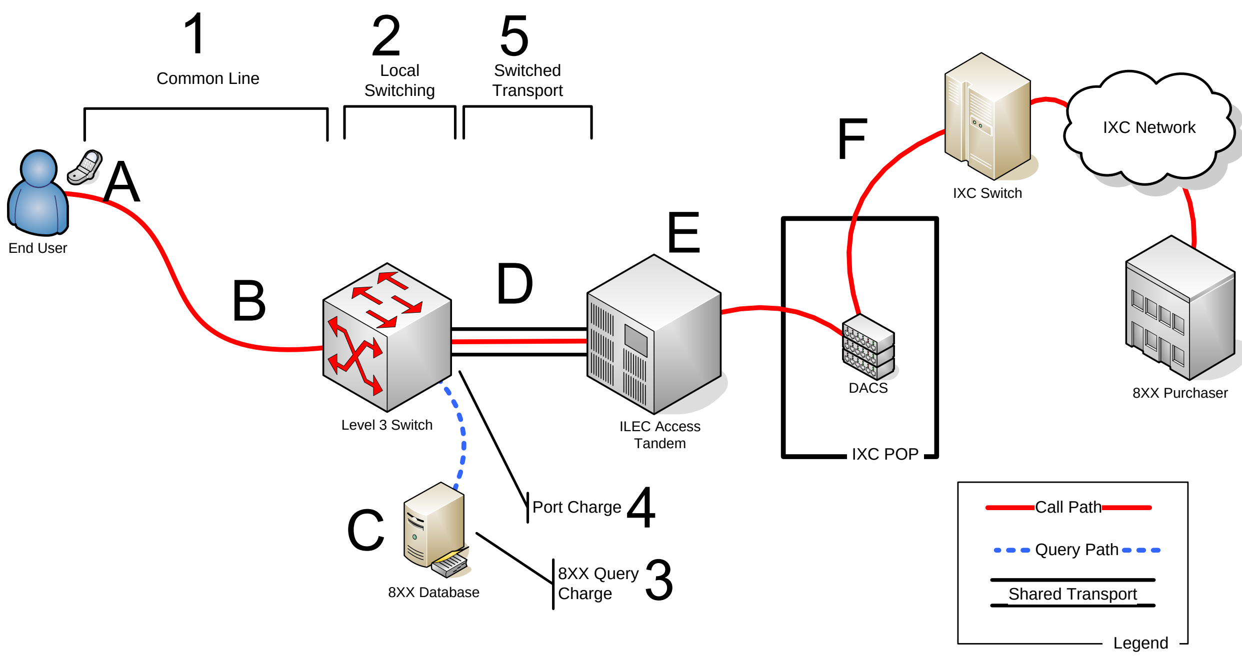
15.4.2 Promotional Rate for Certain Monthly Recurring Charges Associated with Tandem Connect Service

Monthly Recurring Charges for the following Elements will be waived for the first 3 months of service for facilities installed between 04/15/11 and 08/31/11.

Entrance Facility
Direct Trunked Transport 4
Port Charge - Section (C)

SECTION 16 – CALL FLOW DIAGRAMS

Originating Access Service
Calls completed indirectly to the IXC via the Incumbent LEC Access Tandem

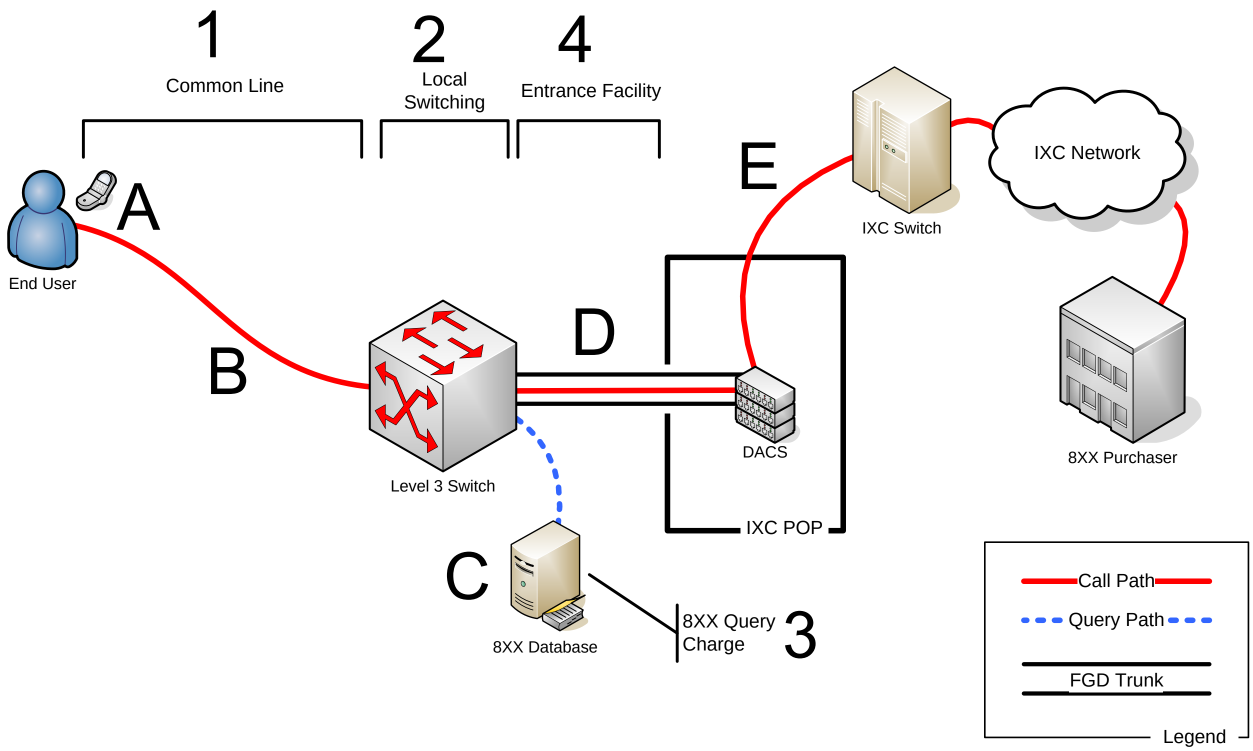


A. End User dials 8XX number
B. Call Routes to Level 3 Switch
C. Level 3 Switch looks up IXC that should receive the call
D. Call is routed across Shared Transport to Incumbent LEC's Access Tandem
E. ILEC routes call to IXC Feature Group D Trunk
F. Call is routed to IXC Switch which routes call across IXC network to customer that purchased the 8XX service

- Level 3 charges Carrier Common Line (1), Local Switching (2), 8XX Query Charge (3), Port Charge (4), and Switched Transport (5) per its tariff
- The Tandem Carrier may bill the IXC for services that they perform on the call path

SECTION 16 – CALL FLOW DIAGRAMS (CONT'D)

Originating Access Service
Calls completed directly to the IXC

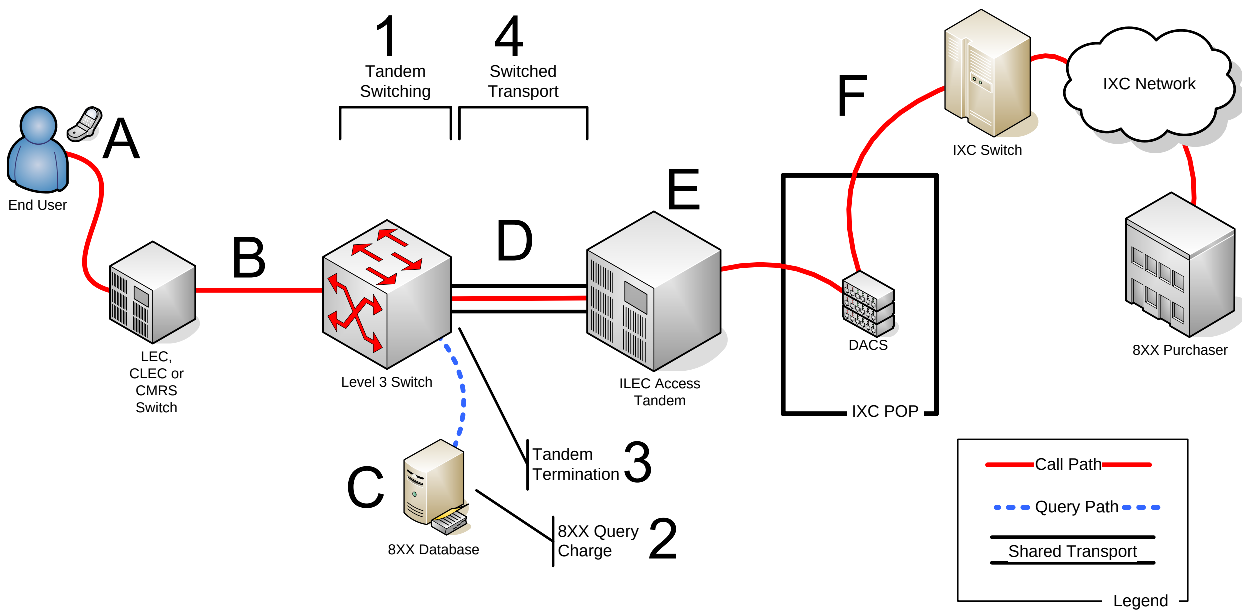


A. End User dials 8XX number
B. Call Routes to Level 3 End Office
C. Level 3 Switch looks up IXC that should receive the call
D. Call is routed across FGD Trunks to Digital Cross Connect System in IXC POP
E. Call is routed to IXC Switch which routes call across IXC network to customer that purchased the 8XX service

Level 3 charges Carrier Common Line (1), Local Switching (2), 8XX Query Charge (3), and Entrance Facility (4) per its tariff

SECTION 16 – CALL FLOW DIAGRAMS (CONT'D)

Toll Free Inter-Exchange Delivery Service
Calls completed indirectly to the IXC via the Incumbent LECs Access Tandem

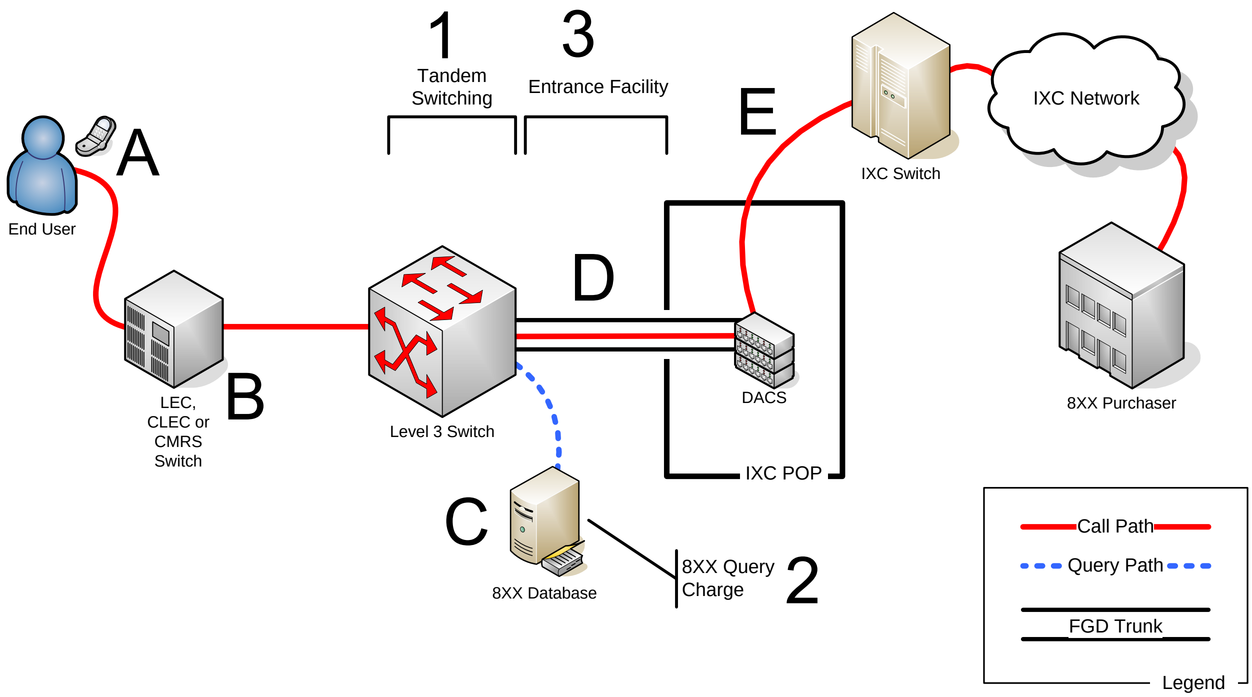


A. End User dials 8XX number
B. LEC, CLEC, or CRMS carrier has agreement with Level 3 and the Incumbent LEC to deliver 8XX Traffic to IXCs
C. Level 3 Switch looks up IXC that should receive the call
D. Call is routed across Shared Transport to Incumbent LEC's Access Tandem
E. Incumbent LEC routes call to IXC Feature Group D Trunk
F. Call is routed to IXC Switch which routes call across IXC network to customer that purchased the 8XX service

- Level 3 charges IXC Tandem Switching (1), 8XX Query Charge (2), Tandem Termination (3) and Switched Transport (4) per its tariff
- The Originating and Incumbent Tandem Carriers may bill the IXC for services that they perform on the call path

SECTION 16 – CALL FLOW DIAGRAMS (CONT'D)

Toll Free Inter-Exchange Delivery Service
Calls completed directly to the IXC



A. End User dials 8XX number
B. LEC, CLEC, or CRMS carrier has agreement with Level 3 to deliver 8XX Traffic to IXCs
C. Level 3 Switch looks up IXC that should receive the call
D. Call is routed across FGD Trunks to Digital Cross Connect System in IXC POP
E. Call is routed to IXC Switch which routes call across IXC network to customer that purchased the 8XX service

- Level 3 charges IXC Tandem Switching (1), 8XX Query Charge (2) and Entrance Facility(3) per its tariff
- The Originating Carrier may bill the IXC for services that they perform on the call path

TITLE SHEET

COMPETITIVE SWITCHED ACCESS SERVICES TARIFF

This tariff applies to the Competitive Switched Access Services furnished by Level 3 Communications, LLC ("Carrier") in the State of Pennsylvania throughout the service territories of Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company [C]
Telephone – PA P.U.C. No. 2 and South Canaan Telephone Company PA P.U.C. No. 7. [C]

This tariff is on file with the Pennsylvania Public Utility Commission, and copies may be inspected, during normal business hours, at Carrier's principal place of business, 1025 Eldorado Boulevard, Broomfield, CO 80021, (720) 888-1000.

TITLE SHEET

COMPETITIVE SWITCHED ACCESS SERVICES TARIFF

This tariff applies to the Competitive Switched Access Services furnished by Level 3 Communications, LLC ("Carrier") in the State of Pennsylvania throughout the service territories of Verizon Pennsylvania LLC Telephone Pa. P.U.C. Nos. 180A, 182, 182A, 185B and 185C; Verizon North LLC Telephone Pa. P.U.C. Nos. 1, 3, 5, and 6; United Telephone Company of Pennsylvania d/b/a CenturyLink P.U.C. No. 27; Frontier Communications Commonwealth Telephone Pa P.U.C. Nos. 23 and 24; Windstream of Pennsylvania, Inc. Pa P.U.C. No. 1; Armstrong Telephone Company – North Pa P.U.C. No. 2; Armstrong Telephone Company of Pennsylvania Pa P.U.C. No. 10; Buffalo Valley Telephone Company Pa P.U.C. No. 7; Citizens Telephone Company of Kecksburg Pa P.U.C. No. 3; Citizens Telecom Company of New York Pa P.U.C. No. 2; Conestoga Telephone & Telegraph Company Pa P.U.C. No. 10; Denver & Ephrata Telephone and Telegraph Company Pa P.U.C. No. 15; Frontier Communications of Breezewood, LLC Pa P.U.C. No. 5; Frontier Communications of Canton, LLC Pa P.U.C. No. 3; Frontier Communications of Lakewood, LLC Pa P.U.C. No. 5; Frontier Communications of Pennsylvania, LLC Pa P.U.C. No. 14; Ironton Telephone Company Pa P.U.C. No. 2; Laurel Highland Telephone Company Pa P.U.C. No. 3; The North-Eastern Pennsylvania Telephone Company Pa P.U.C. No. 9; Consolidated Communications of Pennsylvania Company Pa P.U.C. No. 1; Palmerton Telephone Company Pa P.U.C. No. 5; Pymatuning Independent Telephone Company Pa P.U.C. No. 5, Lackawaxen Telecommunications Services, Inc. Telephone – PA P.U.C. No. 2, North Penn Telephone Company [C]
Telephone – PA P.U.C. No. 2 and South Canaan Telephone Company Telephone – PA P.U.C. No. 7. [C]

This tariff is on file with the Pennsylvania Public Utility Commission, and copies may be inspected, during normal business hours, at Carrier's principal place of business, 1025 Eldorado Boulevard, Broomfield, CO 80021, (720) 888-1000.

CHANGE PAGE

Supplement No. 24 to PA P.U.C. Tariff No. 4 provides for the following:

- Adds service territory of South Canaan Telephone Company.

Issued By: General Counsel - Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

CHECK SHEET

Current pages in this tariff are as follows:

Page	Revision	Page	Revision	Page	Revision
1*	8th Revised	25	1st Revised	53.1	Original
1A*	12th Revised	26	1st Revised	53.2	1st Revised
2*	22nd Revised	27	2nd Revised	54	2nd Revised
3	1st Revised	27.1	Original	55	1st Revised
4	2nd Revised	28	2nd Revised	56	3rd Revised
5	1st Revised	29	2nd Revised	57	2nd Revised
6	1st Revised	30	1st Revised	58	17th Revised
7	3rd Revised	31	2ndt Revised	59	8th Revised
7.1	Original	32	1st Revised	60	10th Revised
8	3rd Revised	33	1st Revised	60.1	Original
9	2nd Revised	34	1st Revised	60.2	Original
10	2nd Revised	35	1st Revised	60.3	Original
11	1st Revised	36	2nd Revised	61	Original
12	1st Revised	37	2nd Revised	62	Original
13	1st Revised	38	1st Revised	63	Original
14	1st Revised	39	2nd Revised	64	Original
15	1st Revised	40	2nd Revised		
16	1st Revised	41	2nd Revised		
17	1st Revised	42	1st Revised		
18	1st Revised	43	1st Revised		
19	2nd Revised	44	1st Revised		
20	3rd Revised	45	2nd Revised		
20.1	1st Revised	46	2nd Revised		
20.2	Original	47	2nd Revised		
21	2nd Revised	48	1st Revised		
22	2nd Revised	49	2nd Revised		
22.1	Original	50	2nd Revised		
22.2	Original	51	2nd Revised		
22.3	Original	51.1	Original		
22.4	Original	51.2	Original		
22.5	Original	51.3	Original		
23	2nd Revised	52	3rd Revised		
24	1st Revised	53	3rd Revised		

Issued By: General Counsel - Regulatory Policy
Level 3 Communications, LLC
1025 Eldorado Boulevard
Broomfield, Colorado 80021

Attachment 5

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): **May 3, 2017**

Level 3 Communications, Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**001-35134**	**47-0210602**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS employer Identification No.)

1025 Eldorado Blvd., Broomfield, Colorado	**80021**
(Address of principal executive offices)	(Zip code)

720-888-1000
(Registrant's telephone number including area code)

Not applicable
(Former name and former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934
(§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02. Results of Operations and Financial Condition

On May 3, 2017, Level 3 Communications, Inc. ("Level 3") issued a press release relating to, among other things, first quarter 2017 financial results, including certain full year 2017 financial projections. This press release is furnished as Exhibit 99.1 to this Form 8-K and incorporated by reference as if set forth in full. The furnishing of this information shall not be deemed an admission as to the materiality of the information included in this Form 8-K. This information is not filed but is furnished to the Securities and Exchange Commission pursuant to Item 2.02 of Form 8-K.

Some statements made in Exhibit 99.1 are forward-looking in nature and are based on management's current expectations or beliefs. These forward-looking statements are not a guarantee of performance and are subject to a number of uncertainties and other factors, many of which are outside Level 3's control, which could cause actual events to differ materially from those expressed or implied by the statements. Important factors that could prevent Level 3 from achieving its stated goals include, but are not limited to, the company's ability to: increase revenue from its services to realize its targets for financial and operating performance; develop and maintain effective business support systems; manage system and network failures or disruptions; avert the breach of its network and computer system security measures; develop new services that meet customer demands and generate acceptable margins; manage the future expansion or adaptation of its network to remain competitive; defend intellectual property and proprietary rights; manage risks associated with continued uncertainty in the global economy; manage continued or accelerated decreases in market pricing for communications services; obtain capacity for its network from other providers and interconnect its network with other networks on favorable terms; successfully integrate future acquisitions; effectively manage political, legal, regulatory, foreign currency and other risks it is exposed to due to its substantial international operations; mitigate its exposure to contingent liabilities; and meet all of the terms and conditions of its debt obligations. Additional information concerning these and other important factors can be found within Level 3's filings with the Securities and Exchange Commission. Statements in Exhibit 99.1 should be evaluated in light of these important factors. Level 3 is under no obligation to, and expressly disclaims any such obligation to, update or alter its forward-looking statements, whether as a result of new information, future events, or otherwise.

Item 9.01. Financial Statements and Exhibits

(a) Financial Statements of Business Acquired
None

(b) Pro Forma Financial Information
None

(c) Shell Company Transactions
None

(d) Exhibits

99.1 Press Release dated May 3, 2017, relating to, among other things, first quarter 2017 financial results, including certain full year 2017 financial projections.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

Level 3 Communications, Inc.

By: /s/ Neil J. Eckstein

Neil J. Eckstein, Senior Vice President

Date: May 3, 2017

Exhibit Index

Exhibit	Description
99.1	Press Release dated May 3, 2017.

Exhibit 99.1

Level(3) COMMUNICATIONS

Connecting and Protecting the Networked World

PRESS RELEASE

Level 3 Reports First Quarter 2017 Results

First Quarter 2017 Highlights

- Reiterated outlook for Adjusted EBITDA and Free Cash Flow for the full year 2017
- Net Income was $95 million, which includes a $44 million pre-tax loss on the extinguishment and modification of debt
- Adjusted EBITDA grew to $725 million, excluding $20 million of CenturyLink acquisition-related expenses
- Generated Cash Flows from Operating Activities of $539 million and Free Cash Flow of $173 million, excluding $2 million of cash used for CenturyLink acquisition-related expenses

BROOMFIELD, Colo., May 3, 2017 — Level 3 Communications, Inc. (NYSE: LVLT) today reported results for the quarter ended March 31, 2017.

“In the first quarter 2017, we continued to grow our enterprise Core Network Services revenue and we remain focused on delivering profitable growth,” said Jeff Storey, president and CEO of Level 3. “In addition, we continue to make good progress and are working hard on integration planning, so the combined company can execute quickly after the transaction closes.”

Total revenue was $2.048 billion for the first quarter 2017, compared to $2.051 billion for the first quarter 2016. In the first quarter 2017, the company generated net income of $95 million and basic earnings per share of $0.26. Excluding a $44 million loss on the extinguishment and modification of debt related to a refinancing transaction completed during the quarter, basic earnings per share were $0.34 after taxes for the first quarter 2017.

Financial Results

Metric ($ in millions)	First Quarter 2017	First Quarter 2016(1)
Core Network Services Revenue	$ 1,946	$ 1,946
Wholesale Voice Services Revenue	$ 102	$ 105
Total Revenue	$ 2,048	$ 2,051
Network Access Costs	$ 691	$ 694
Network Access Margin	66.3%	66.2%
Network Related Expenses (NRE)(2)	$ 330	$ 331
Selling, General and Administrative Expenses (SG&A)(2)	$ 322	$ 316
Non-cash Compensation Expense	$ 48	$ 47
Adjusted EBITDA, including acquisition-related expenses(3)(4)	$ 705	$ 710
Adjusted EBITDA, excluding acquisition-related expenses(3)(4)	$ 725	$ 710
Adjusted EBITDA Margin, including acquisition-related expenses (3)(4)	34.4%	34.6%
Adjusted EBITDA Margin, excluding acquisition-related expenses(3)(4)	35.4%	34.6%
Cash Flows from Operating Activities	$ 539	$ 510
Capital Expenditures	$ 368	$ 297
Unlevered Cash Flow(3)(4)	$ 322	$ 324
Free Cash Flow, including acquisition-related expenses(3)(4)	$ 171	$ 213
Free Cash Flow, excluding acquisition-related expenses(3)(4)	$ 173	$ 213
Net Income(5)	$ 95	$ 128
Net Income per Common Share-Basic(5)	$ 0.26	$ 0.36
Weighted Average Shares Outstanding (in thousands)- Basic	361,461	356,785

(1) *The reported first quarter 2016 results have been adjusted to reflect changes made to customer assignments between the wholesale and enterprise channels as of the beginning of 2017.*
(2) *Excludes non-cash compensation expense.*
(3) *In the first quarter 2017, acquisition-related expenses were $20 million, of which $18 million were non-cash expenses and $2 million were cash expenses.*
(4) *See schedule of non-GAAP metrics for definitions and reconciliation to GAAP measures.*
(5) *Results have been adjusted to reflect the Company's adoption of Accounting Standards Update 2016-09, Improvements to Employee Share-Based Payment Accounting.*

First Quarter 2017 Revenue Results

Core Network Services (CNS) Revenue ($ in millions)	First Quarter 2017	First Quarter 2016(1)	1Q17/1Q16 Percent Change	1Q17/1Q16 Percent Change, Constant Currency
North America	**$ 1,594**	**$ 1,601**	**—%**	**—%**
Wholesale	$ 403	$ 434	(7)%	(7)%
Enterprise	$ 1,191	$ 1,167	2%	2%
EMEA	**$ 175**	**$ 190**	**(8)%**	**(1)%**
Wholesale	$ 55	$ 64	(14)%	(7)%
Enterprise	$ 106	$ 107	(1)%	5%
UK Government	$ 14	$ 19	(26)%	(15)%
Latin America	**$ 177**	**$ 155**	**14%**	**7%**
Wholesale	$ 36	$ 39	(8)%	(13)%
Enterprise	$ 141	$ 116	22%	13%
Total CNS Revenue	**$ 1,946**	**$ 1,946**	**—%**	**—%**
Wholesale	$ 494	$ 537	(8)%	(7)%
Enterprise	$ 1,452	$ 1,409	3%	3%

(1) *The reported first quarter 2016 results have been adjusted to reflect changes made to customer assignments between the wholesale and enterprise channels as of the beginning of 2017.*

Capital Markets Transaction and Liquidity

During the quarter, Level 3 Financing, Inc., completed the refinancing of its Tranche B-III 2019 Term Loan, the Tranche B 2020 Term Loan and the Tranche B-II 2022 Term Loan with Level 3 Financing, Inc.'s approximately $4.61 billion Tranche B 2024 Term Loan. The Tranche B 2024 Term Loan bears interest at LIBOR plus 2.25 percent, with a zero percent minimum LIBOR, and will mature on February 22, 2024. As a result of this transaction, the company paid higher cash interest of $153 million during the first quarter 2017.

As of March 31, 2017, the company had cash and cash equivalents of $1.947 billion.

2017 Business Outlook

"We are confident in our performance for the rest of the year and we are reiterating our outlook for the full year 2017," said Sunit Patel, executive vice president and CFO of Level 3. "We continue to expect Adjusted EBITDA of $2.94 to $3.00 billion and Free Cash Flow of $1.10 to $1.16 billion, excluding CenturyLink acquisition-related expenses. With the exception of GAAP interest expense, which we lowered to $540 million, the remainder of our outlook measures are unchanged."

Metrics(1)	2017 Outlook
Adjusted EBITDA	$2.94 to $3.00 billion
Free Cash Flow	$1.10 to $1.16 billion
GAAP Interest Expense(2)	$540 million
Cash Interest Expense	$520 million
Capital Expenditures	16% of Total Revenue
Depreciation and Amortization	$1.35 billion
Cash Income Tax	$40 million
Non-cash Compensation Expense	$170 million
Full Year Income Tax Rate	~38%

(1) *All outlook measures exclude CenturyLink acquisition-related expenses.*
(2) *Lowered GAAP interest expense outlook to $540 million from $570 million for the full year 2017.*

Conference Call and Website Information

Level 3 will broadcast a live conference call on its Investor Relations website, http://investors.level3.com at 3:30 p.m. MT/5:30 p.m. ET. Additional information regarding the first quarter 2017 results, including the presentation management will review on the conference call, will be available on Level 3's Investor Relations website. If you are unable to join the call via the Web, the call can be accessed live at +1 877-283-5145 (U.S. Domestic) or +1 312-281-1200 (International).

The call will be archived and available as an audio replay on Level 3's Investor Relations website starting at 7 p.m. ET May 3 until 6 p.m. ET Aug. 1, 2017. The replay can be accessed by dialing +1 800-633-8284 (U.S. Domestic) or +1 402-977-9140 (International), reservation code 21848929.

For additional information, please call +1 720-888-2518.

About Level 3 Communications

Level 3 Communications, Inc. (NYSE: LVLT) is a Fortune 500 company that provides local, national and global communications services to enterprise, government and carrier customers. Level 3's comprehensive portfolio of secure, managed solutions includes fiber and infrastructure solutions; IP-based voice and data communications; wide-area Ethernet services; video and content distribution; data center and cloud-based solutions. Level 3 serves customers in more than 500 markets in over 60 countries across a global services platform anchored by owned fiber networks on three continents and connected by extensive undersea facilities. For more information, please visit www.level3.com or get to know us on Twitter, Facebook and LinkedIn.

Forward Looking Statements

Some statements made in this press release are forward-looking in nature and are based on management's current expectations or beliefs. These forward-looking statements are not a guarantee of performance and are subject to a number of uncertainties and other factors, many of which are outside Level 3's control, which could cause actual events to differ materially from those expressed or implied by the statements. Important factors that could prevent Level 3 from achieving its stated goals include, but are not limited to, the company's ability to: increase revenue from its services to realize its targets for financial and operating performance; develop and maintain effective business support systems; manage system and network failures or disruptions; avert the breach of its network and computer system security measures; develop new services that meet customer demands and generate acceptable margins; manage the future expansion or adaptation of its network to remain competitive; defend intellectual property and proprietary rights; manage risks associated with continued uncertainty in the global economy; manage continued or accelerated decreases in market pricing for communications services; obtain capacity for its network from other providers and interconnect its network with other networks on favorable terms; successfully integrate future acquisitions; effectively manage political, legal, regulatory, foreign currency and other risks it is exposed to due to its substantial international operations; mitigate its exposure to contingent liabilities; and meet all of the terms and conditions of its debt obligations. Additional information concerning these and other important factors can be found within Level 3's filings with the Securities and Exchange Commission. Statements in this press release should be evaluated in light of these important factors. Level 3 is under no obligation to, and expressly disclaims any such obligation to, update or alter its forward-looking statements, whether as a result of new information, future events, or otherwise.

Except for the historical and factual information contained herein, the matters set forth in this communication, including statements regarding the expected timing and benefits of the proposed transaction, such as efficiencies, cost savings, enhanced revenues, growth potential, market profile and financial strength, and the competitive ability and position of the combined company, and other statements identified by words such as "will," "estimates," "anticipates," "believes," "expects," "projects," "plans," "intends," "may," "should," "could," "seeks" and similar expressions, are forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, many of which are beyond our control. These forward-looking statements, and the assumptions upon which they are based, (i) are not guarantees of future results, (ii) are inherently speculative and (iii) are subject to a number of risks and uncertainties. Actual events and results may differ materially from those anticipated, estimated, projected or implied in those statements if one or more of these risks or uncertainties materialize, or if underlying assumptions prove incorrect. Factors that could affect actual results include but are not limited to: the ability of the parties to timely and successfully receive the required approvals for the combination from regulatory agencies free of conditions materially adverse to the parties and from their respective shareholders; the possibility that the anticipated benefits from the proposed transaction cannot be fully realized or may take longer to realize than expected; the possibility that costs, difficulties or disruptions related to the integration of Level 3's operations with those of CenturyLink will be greater than expected; the ability of the combined company to retain and hire key personnel; the effects of competition from a wide variety of competitive providers, including lower demand for CenturyLink's legacy offerings; the effects of new, emerging or competing technologies, including those that could make the combined company's products less desirable or obsolete; the effects of ongoing changes in the regulation of the communications industry, including the outcome of regulatory or judicial proceedings relating to intercarrier compensation, interconnection obligations, access charges, universal service, broadband deployment, data protection and net neutrality; adverse changes in CenturyLink's or the combined company's access to credit markets on favorable terms, whether caused by changes in its financial position, lower debt credit ratings, unstable markets or otherwise; the combined company's ability to effectively adjust to changes in the communications industry, and changes in the composition of its markets and product mix; possible changes in the demand for, or pricing of, the combined company's products and services, including the combined company's ability to effectively respond to increased demand for high-speed broadband service; changes in the operating plans, capital allocation plans or corporate strategies of the combined company, whether based on changes in market conditions, changes in the cash flows or financial position of the combined company, or otherwise; the combined company's ability to successfully maintain the quality and profitability of its existing product and service offerings and to introduce new offerings on a timely and cost-effective basis; the adverse impact on the combined company's business and network from possible equipment failures, service outages, security breaches or similar events impacting its network; the combined company's ability to maintain favorable relations with key business partners, suppliers, vendors, landlords and financial institutions; the ability of the combined company to utilize net operating losses in amounts projected; changes in the future cash requirements of the combined company; and other risk factors and cautionary statements as detailed from time to time in each of CenturyLink's and Level 3's reports filed with the U.S. Securities and Exchange Commission (the "SEC"). Due to these risks and uncertainties, there can be no assurance that the proposed combination or any other transaction described above will in fact be completed in the manner described or at all. You should be aware that new factors may emerge from time to time and it is not possible for us to identify all such factors nor can we predict the impact of each such factor on the proposed combination or the combined company. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this communication. Unless legally required, CenturyLink and Level 3 undertake no obligation and each expressly disclaim any such obligation, to update publicly any forward-looking statements, whether as a result of new information, future events, changed events or otherwise.

Additional Information

In connection with the proposed combination, CenturyLink filed a registration statement on Form S-4 with the SEC (Registration Statement No. 333-215121), which was declared effective by the

SEC on February 13, 2017. CenturyLink and Level 3 have filed a joint proxy statement/prospectus and will file other relevant documents concerning the proposed transaction with the SEC. CenturyLink and Level 3 began mailing the definitive joint proxy statement/prospectus to their respective security holders on or about February 13, 2017. The definitive joint proxy statement/prospectus, dated as of February 13, 2017, contains important information about CenturyLink, Level 3, the proposed combination and related matters. INVESTORS AND SECURITY HOLDERS ARE URGED TO READ THE DEFINITIVE JOINT PROXY STATEMENT/PROSPECTUS AND ANY OTHER RELEVANT DOCUMENTS FILED WITH THE SEC IN CONNECTION WITH THE PROPOSED COMBINATION OR INCORPORATED BY REFERENCE IN THE DEFINITIVE JOINT PROXY STATEMENT/PROSPECTUS CAREFULLY BECAUSE THEY CONTAIN IMPORTANT INFORMATION. Investors and security holders may obtain the definitive joint proxy statement/prospectus and the filings that are incorporated by reference in the definitive joint proxy statement/prospectus, as well as other filings containing information about CenturyLink and Level 3, free of charge, at the website maintained by the SEC at www.sec.gov. Investors and security holders may also obtain these documents free of charge by directing a request to CenturyLink, 100 CenturyLink Drive, Monroe, Louisiana 71203, Attention: Corporate Secretary, or to Level 3, 1025 Eldorado Boulevard, Broomfield, Colorado 80021, Attention: Investor Relations.

Contact Information

Media:
D. Nikki Wheeler
+1 720-888-0560
nikki.wheeler@level3.com

Investors:
Mark Stoutenberg
+1 720-888-2518
mark.stoutenberg@level3.com

Level 3 Communications:

Non-GAAP Metrics

Pursuant to Regulation G, the company is hereby providing definitions of non-GAAP financial metrics and reconciliations to the most directly comparable GAAP measures.

The following describes and reconciles those financial measures as reported under accounting principles generally accepted in the United States (GAAP) with those financial measures as adjusted by the items detailed below and presented in the accompanying news release. These calculations are not prepared in accordance with GAAP and should not be viewed as alternatives to GAAP. In keeping with its historical financial reporting practices, the company believes that the supplemental presentation of these calculations provides meaningful non-GAAP financial measures to help investors understand and compare business trends among different reporting periods on a consistent basis.

In addition, measures referred to in the accompanying news release as being calculated “on a constant currency basis” or “in constant currency terms” are non-GAAP metrics intended to present the relevant information assuming a constant exchange rate between the two periods being compared. Such metrics are calculated by applying the currency exchange rates used in the preparation of the prior period financial results to the subsequent period results.

Level 3 Communications, Inc. and Consolidated Subsidiaries
Quarterly Constant Currency

CNS Revenue ($ in millions)	1Q17	1Q16 FX 1Q17 Constant Currency	4Q16 FX 1Q17 Constant Currency	1Q16(2)	4Q16(2)	1Q17/ 1Q16 %Change	1Q16 FX 1Q17 Constant Currency / 1Q16 %Change (3)	1Q17/ 4Q16 %Change	4Q16 FX 1Q17 Constant Currency /4Q16 %Change (3)
North America	**$ 1,594**	**$ 1,594**	**$ 1,594**	**$ 1,601**	**$ 1,584**	(0.4)%	(0.4)%	0.6%	0.6%
Wholesale	$ 403	$ 403	$ 403	$ 434	$ 405	(7.1)%	(7.1)%	(0.5)%	(0.5)%
Enterprise	$ 1,191	$ 1,191	$ 1,191	$ 1,167	$ 1,179	2.1%	2.1%	1.0%	1.0%
EMEA	**$ 175**	**$ 188**	**$ 176**	**$ 190**	**$ 179**	(7.9)%	(1.0)%	(2.2)%	(1.8)%
Wholesale	$ 55	$ 59	$ 56	$ 64	$ 55	(14.1)%	(7.5)%	—%	0.1%
Enterprise	$ 106	$ 113	$ 106	$ 107	$ 108	(0.9)%	5.4%	(1.9)%	(1.3)%
UK Govt	$ 14	$ 16	$ 14	$ 19	$ 16	(26.3)%	(15.5)%	(12.5)%	(12.2)%
Latin America	**$ 177**	**$ 166**	**$ 174**	**$ 155**	**$ 170**	14.2%	6.8%	4.1%	2.4%
Wholesale	$ 36	$ 34	$ 35	$ 39	$ 34	(7.7)%	(13.0)%	5.9%	2.7%
Enterprise	$ 141	$ 132	$ 139	$ 116	$ 136	21.6%	13.5%	3.7%	2.3%
Total CNS Revenue	**$ 1,946**	**$ 1,948**	**$ 1,944**	**$ 1,946**	**$ 1,933**	—%	0.1%	0.7%	0.5%
Wholesale	$ 494	$ 496	$ 494	$ 537	$ 494	(8.0)%	(7.4)%	—%	(0.2)%
Enterprise(1)	$ 1,452	$ 1,452	$ 1,450	$ 1,409	$ 1,439	3.1%	3.0%	0.9%	0.8%
Total CNS Revenue	**$ 1,946**	**$ 1,948**	**$ 1,944**	**$ 1,946**	**$ 1,933**	—%	0.1%	0.7%	0.5%
Wholesale Voice Services	**102**	**102**	**101**	**105**	**99**	(2.9)%	(3.6)%	3.0%	2.9%
Total Revenue	**$ 2,048**	**$ 2,050**	**$ 2,045**	**$ 2,051**	**$ 2,032**	(0.1)%	(0.1)%	0.8%	0.6%

(1) includes UK Government
(2) The 2016 results have been adjusted to reflect changes made to customer assignments between the wholesale and enterprise channels as of the beginning of 2017.
(3) Percentages are calculated using whole numbers. Minor differences may exist due to rounding.

Consolidated Revenue is defined as total revenue from the Consolidated Statements of Income.

Core Network Services Revenue includes revenue from colocation and datacenter services, transport and fiber, IP and data services, and voice services (local and enterprise).

Network Access Costs includes leased capacity, right-of-way costs, access charges, satellite transponder lease costs and other third party costs directly attributable to providing access to customer locations from the Level 3 network, but excludes Network Related Expenses, and depreciation and amortization. Network Access Costs do not include any employee expenses or impairment expenses; these expenses are allocated to Network Related Expenses or Selling, General and Administrative Expenses.

Network Related Expenses includes certain expenses associated with the delivery of services to customers and the operation and maintenance of the Level 3 network, such as facility rent, utilities, maintenance and other costs, each related to the operation of its communications network, as well as salaries, wages and related benefits (including non-cash stock-based compensation expenses) associated with personnel who are responsible for the delivery of services, operation and maintenance of its communications network, and accretion expense on asset retirement obligations, but excludes depreciation and amortization.

Network Access Margin ($) is defined as total Revenue less Network Access Costs from the Consolidated Statements of Income, and excludes Network Related Expenses.

Network Access Margin (%) is defined as Network Access Margin ($) divided by total Revenue. Management believes that network access margin is a relevant metric to provide to investors, as it is a metric that management uses to measure the margin available to the company after it pays third party network services costs; in essence, a measure of the efficiency of the company's network.

Adjusted EBITDA is defined as net income (loss) from the Consolidated Statements of Income before income tax (expense) benefit, total other income (expense), non-cash impairment charges, depreciation and amortization and non-cash stock compensation expense.

Adjusted EBITDA Margin is defined as Adjusted EBITDA divided by total revenue.

Adjusted EBITDA Metric

($ in millions)	1Q17	1Q16
Net Income	$ 95	$ 128
Income Tax Expense	70	90
Total Other Expense	172	144
Depreciation and Amortization	320	301
Non-Cash Stock Compensation	48	47
Adjusted EBITDA	**$ 705**	**$ 710**
Add back: Acquisition-Related Expenses	20	—
Adjusted EBITDA Excluding Acquisition-Related Expenses	**$ 725**	**$ 710**
Total Revenue	$ 2,048	$ 2,051
Adjusted EBITDA Margin	**34.4%**	**34.6%**
Adjusted EBITDA Excluding Acquisition-Related Expenses Margin	**35.4%**	**34.6%**

Management believes that Adjusted EBITDA and Adjusted EBITDA Margin are relevant and useful metrics to provide to investors, as they are an important part of the company's internal reporting and are key measures used by Management to evaluate profitability and operating performance of the company and to make resource allocation decisions. Management believes such measures are especially important in a capital-intensive industry such as telecommunications. Management also uses Adjusted EBITDA and Adjusted EBITDA Margin to compare the company's performance to that of its competitors and to eliminate certain non-cash and non-operating items in order to consistently measure from period to period its ability to fund capital expenditures, fund growth, service debt and determine bonuses. Adjusted EBITDA excludes non-cash impairment charges and non-cash stock compensation expense because of the non-cash nature of these items. Adjusted EBITDA also excludes interest income, interest expense and income taxes because these items are associated with the company's capitalization and tax structures. Adjusted EBITDA also excludes depreciation and amortization expense because these non-cash expenses primarily reflect the impact of historical capital investments, as opposed to the cash impacts of capital expenditures made in recent periods, which may be evaluated through cash flow measures. Adjusted EBITDA excludes the gain (or loss) on extinguishment and modification of debt and other, net because these items are not related to the primary operations of the company.

There are limitations to using Adjusted EBITDA as a financial measure, including the difficulty associated with comparing companies that use similar performance measures whose calculations may differ from the company's calculations. Additionally, this financial measure does not include certain significant items such as interest income, interest expense, income taxes, depreciation and amortization, non-cash impairment charges, non-cash stock compensation expense, the gain (or loss) on extinguishment and modification of debt and net other income (expense). Adjusted EBITDA and Adjusted EBITDA Margin should not be considered a substitute for other measures of financial performance reported in accordance with GAAP.

Unlevered Cash Flow is defined as net cash provided by (used in) operating activities less capital expenditures, plus cash interest paid and less interest income all as disclosed in the Consolidated Statements of Cash Flows or the Consolidated Statements of Income. Management believes that Unlevered Cash Flow is a relevant metric to provide to investors, as it is an indicator of the operational strength and performance of the company and, measured over time, provides management and investors with a sense of the underlying business' growth pattern and ability to generate cash. Unlevered Cash Flow excludes cash used for acquisitions and debt service and the impact of exchange rate changes on cash and cash equivalents balances.

There are material limitations to using Unlevered Cash Flow to measure the company's cash performance as it excludes certain material items such as payments on and repurchases of long-term debt, interest income, cash interest expense and cash used to fund acquisitions. Comparisons of Level 3's Unlevered Cash Flow to that of some of its competitors may be of limited usefulness since Level 3 does not currently pay a significant amount of income taxes due to net operating loss carryforwards, and therefore, generates higher cash flow than a comparable business that does pay income taxes. Additionally, this financial measure is subject to variability quarter over quarter as a result of the timing of payments related to accounts receivable and accounts payable and capital expenditures. Unlevered Cash Flow should not be used as a substitute for net change in cash and cash equivalents in the Consolidated Statements of Cash Flows.

Free Cash Flow is defined as net cash provided by (used in) operating activities less capital expenditures as disclosed in the Consolidated Statements of Cash Flows. Management believes that Free Cash Flow is a relevant metric to provide to investors, as it is an indicator of the company's ability to generate cash to service its debt. Free Cash Flow excludes cash used for acquisitions, principal repayments and the impact of exchange rate changes on cash and cash equivalents balances.

There are material limitations to using Free Cash Flow to measure the company's performance as it excludes certain material items such as principal payments on and repurchases of long-term debt and cash used to fund acquisitions. Comparisons of Level 3's Free Cash Flow to that of some of its competitors may be of limited usefulness since Level 3 does not currently pay a significant amount of income taxes due to net operating loss carryforwards, and therefore, generates higher cash flow than a comparable business that does pay income taxes. Additionally, this financial measure is subject to variability quarter over quarter as a result of the timing of payments related to interest expense, accounts receivable and accounts payable and capital expenditures. Free Cash Flow should not be used as a substitute for net change in cash and cash equivalents on the Consolidated Statements of Cash Flows.

Unlevered Cash Flow and Free Cash Flow

($ in millions)	1Q16	1Q17(1)
Net Cash Provided by Operating Activities	$ 510	$ 539
Capital Expenditures	(297)	(368)
Free Cash Flow	**$ 213**	**$ 171**
Cash Interest Paid	112	153
Interest Income	(1)	(2)
Unlevered Cash Flow	**$ 324**	**$ 322**

(1)Includes $2 million of cash used for CenturyLink acquisition-related expenses.

Debt is defined as total gross debt, including capital leases from the Footnotes to the Consolidated Financial Statements.

Net Debt to Last Twelve Months (LTM) Adjusted EBITDA Ratio is defined as Debt, reduced by cash and cash equivalents and divided by LTM Adjusted EBITDA Excluding Acquisition-Related Expenses.

Level 3 Communications, Inc. and Consolidated Subsidiaries
LTM Adjusted EBITDA

($ in millions)	2Q16	3Q16	4Q16	1Q17	Total: LTM
Total Revenue	$ 2,056	$ 2,033	$ 2,032	$ 2,048	$ 8,169
Network Access Costs	(676)	(675)	(680)	(691)	(2,722)
Network Related Expenses	(339)	(337)	(332)	(336)	(1,344)
Selling, General and Administrative Expenses	(357)	(348)	(346)	(364)	(1,415)
Add back: Non-Cash Compensation Expenses	31	43	35	48	157
Adjusted EBITDA	**$ 715**	**$ 716**	**$ 709**	**$ 705**	**$ 2,845**
Add back: Acquisition-Related Expenses	—	—	15	20	35
Adjusted EBITDA Excluding Acquisition-Related Expenses	**$ 715**	**$ 716**	**$ 724**	**$ 725**	**$ 2,880**

Level 3 Communications, Inc. and Consolidated Subsidiaries
Net Debt to LTM Adjusted EBITDA ratio as of March 31, 2017
($ in millions)

Debt	$	11,009
Cash and Cash Equivalents		(1,947)
Net Debt	$	9,062
LTM Adjusted EBITDA Excluding Acquisition-Related Expenses	**$**	**2,880**
Net Debt to LTM Adjusted EBITDA Ratio		3.1

Outlook

In order to provide our outlook with respect to non-GAAP metrics, we are required to indicate a range for GAAP measures that are components of the reconciliation of the non-GAAP metric. The provision of these ranges is in no way meant to indicate that the company is explicitly or implicitly providing an outlook on those GAAP components of the reconciliation. In order to reconcile the non-GAAP financial metric to GAAP, the company has to use ranges for the GAAP components that arithmetically add up to the non-GAAP financial metric. While the company feels reasonably comfortable about the outlook for its non-GAAP financial metrics, it fully expects that the ranges used for the GAAP components will vary from actual results. We will consider our outlook of non-GAAP financial metrics to be accurate if the specific non-GAAP metric is met or exceeded, even if the GAAP components of the reconciliation are different from those provided in an earlier reconciliation.

Level 3 Communications, Inc. and Consolidated Subsidiaries
Outlook

Adjusted EBITDA Outlook

Twelve Months Ended December 31, 2017

($ in millions)	Range Low		Range High	
Net Income	**$**	**500**	**$**	**590**
Income Tax Expense		330		360
Total Other Expense		570		550
Depreciation and Amortization Expense		1,360		1,340
Non-Cash Compensation Expense		180		160
Adjusted EBITDA	**$**	**2,940**	**$**	**3,000**

Free Cash Flow Outlook

Twelve Months Ended December 31, 2017

($ in millions)	Range Low		Range High	
Net Cash Provided by Operating Activities	$	2,420	$	2,520
Capital Expenditures		(1,320)		(1,360)
Free Cash Flow	$	1,100	$	1,160

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Statements of Income
(unaudited)

(dollars in millions, except per share data)	Three Months Ended March 31, 2017	December 31, 2016	March 31, 2016(1)
Revenue	$ 2,048	$ 2,032	$ 2,051
Costs and Expenses			
Network access costs	691	680	694
Network related expenses	336	332	338
Depreciation and amortization	320	320	301
Selling, general and administrative expenses	364	346	356
Total Costs and Expenses	1,711	1,678	1,689
Operating Income	337	354	362
Other Income (Expense):			
Interest income	2	1	1
Interest expense	(134)	(132)	(135)
Loss on modification and extinguishment of debt	(44)	—	—
Other, net	4	(6)	(10)
Total Other Expense	(172)	(137)	(144)
Income Before Income Taxes	165	217	218
Income Tax (Expense) Benefit	(70)	33	(90)
Net Income	$ 95	$ 250	$ 128
Basic Earnings per Common Share:			
Net Income per Share	$ 0.26	$ 0.70	$ 0.36
Weighted-Average Shares Outstanding (in thousands)	361,461	359,937	356,785
Diluted Earnings per Common Share:			
Net Income per Share	$ 0.26	$ 0.69	$ 0.36
Weighted-Average Shares Outstanding (in thousands)	364,121	363,250	360,745

(1) Results have been adjusted to reflect the Company's adoption of Accounting Standards Update 2016-09, *Improvements to Employee Share-Based Payment Accounting.*

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
(unaudited)

(dollars in millions)	March 31, 2017	December 31, 2016	March 31, 2016
Assets			
Current Assets:			
Cash and cash equivalents	$ 1,947	$ 1,819	$ 1,004
Restricted cash and securities	7	7	837
Receivables, less allowances for doubtful accounts	712	712	807
Other	141	115	141
Total Current Assets	2,807	2,653	2,789
Property, Plant and Equipment, net	10,285	10,139	9,974
Restricted Cash and Securities	31	31	41
Goodwill	7,731	7,729	7,746
Other Intangibles, net	861	915	1,074
Deferred Tax Assets	3,305	3,370	3,411
Other Assets	51	51	50
Total Assets	$ 25,071	$ 24,888	$ 25,085
Liabilities and Stockholders' Equity			
Current Liabilities:			
Accounts payable	$ 750	$ 706	$ 680
Current portion of long-term debt	307	7	781
Accrued payroll and employee benefits	148	195	146
Accrued interest	101	129	131
Current portion of deferred revenue	275	266	283
Other	153	168	166
Total Current Liabilities	1,734	1,471	2,187
Long-Term Debt, less current portion	10,581	10,877	10,870
Deferred Revenue, less current portion	1,044	1,001	1,012
Other Liabilities	631	622	628
Total Liabilities	13,990	13,971	14,697
Stockholders' Equity	11,081	10,917	10,388
Total Liabilities and Stockholders' Equity	$ 25,071	$ 24,888	$ 25,085

LEVEL 3 COMMUNICATIONS, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
(unaudited)

(dollars in millions)	Three Months Ended March 31, 2017	December 31, 2016	March 31, 2016
Cash Flows from Operating Activities:			
Net income	$ 95	$ 250	$ 128
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	320	320	301
Non-cash compensation expense attributable to stock awards	48	35	47
Loss on modification and extinguishment of debt	44	—	—
Accretion of debt discount and amortization of debt issuance costs	5	6	5
Accrued interest on long-term debt, net	(28)	(6)	23
Deferred income taxes	62	(40)	81
Gain on sale of property, plant and equipment and other assets	—	(1)	—
Other, net	(5)	(3)	(9)
Changes in working capital items:			
Receivables	6	15	(44)
Other current assets	(32)	4	(35)
Payables	42	(16)	48
Deferred revenue	50	(3)	46
Other current liabilities	(68)	(4)	(81)
Net Cash Provided by Operating Activities	539	557	510
Cash Flows from Investing Activities:			
Capital expenditures	(368)	(306)	(297)
Change in restricted cash and securities, net	—	1	(828)
Proceeds from sale of property, plant and equipment and other assets	—	2	—
Net Cash Used in Investing Activities	(368)	(303)	(1,125)
Cash Flows from Financing Activities:			
Long-term debt borrowings, net of issuance costs	4,569	—	765
Payments on and repurchases of long-term debt and capital leases	(4,613)	(2)	(1)
Net Cash (Used in) Provided by Financing Activities	(44)	(2)	764
Effect of Exchange Rates on Cash and Cash Equivalents	1	(2)	1
Net Change in Cash and Cash Equivalents	128	250	150
Cash and Cash Equivalents at Beginning of Period	1,819	1,569	854
Cash and Cash Equivalents at End of Period	$ 1,947	$ 1,819	$ 1,004
Supplemental Disclosure of Cash Flow Information:			
Cash interest paid	$ 153	$ 136	$ 112

Attachment 6

MOODY'S
INVESTORS SERVICE

Rating Action: Moody's rates Level 3's Term Loan Ba1; outlook remains stable

Global Credit Research - 09 Feb 2017

$2.6 billion of new debt rated

Toronto, February 09, 2017 -- Moody's Investors Service, (Moody's) assigned a Ba1 rating to Level 3 Financing, Inc.'s (Financing) new $2.6 billion secured term loan B. Financing is a wholly-owned subsidiary of Level 3 Communications, Inc. (Level 3), a publicly traded holding company that guarantees Financing's notes and, as the senior most company at which Moody's maintains ratings, is the entity at which Moody's maintains corporate level ratings. The new loan has no ratings implications as it refinances existing facilities of the same aggregate amount (Financing's existing $815 million term loan B due 2019 and $1,796 million term loan B due 2020). Level 3's and Financing's other ratings and stable outlook remain unchanged (see ratings listing, below).

Ratings for instruments that will be refinanced will be withdrawn in due course (refer to Moody's policies relating to ratings withdrawals). The following summarizes Moody's ratings and today's rating actions for Level 3, all of which are contingent upon Moody's review of final documentation and no material change in previously advised terms and conditions.

Assignments:

..Issuer: Level 3 Financing, Inc.

....Senior Secured Bank Credit Facility, Assigned Ba1 (LGD2)

Existing Ratings and Outlook

..Issuer: Level 3 Communications, Inc.

.... Corporate Family Rating, Ba3

.... Probability of Default Rating, Ba3-PD

.... Speculative Grade Liquidity Rating, SGL-2

....Senior Unsecured Regular Bond/Debenture, B2 (LGD6)

.... Outlook, Stable

..Issuer: Level 3 Financing, Inc.

....Senior Secured Bank Credit Facility, Ba1 (LGD2)

....Senior Unsecured Regular Bond/Debenture, B1 (LGD5)

....Backed Senior Secured Bank Credit Facility, Ba1 (LGD2)

....Backed Senior Unsecured Regular Bond/Debenture, B1 (LGD5)

.... Outlook, Stable

..Issuer: Level 3 Escrow II, Inc. (assumed by Level 3 Financing, Inc.)

....Backed Senior Unsecured Regular Bond/Debenture, B1 (LGD5)

RATINGS RATIONALE

Level 3's Ba3 CFR is based on the company's solid business and financial profile, Moody's expectation of modest margin improvement as Internet Protocol-based services continue to replace legacy services, and leverage of debt/EBITDA approaching 3.75x in 2017. The rating is constrained by a lack of forwards earnings visibility and off-market liquidity arrangements which rely solely on cash and free cash flow. In the event of an acquisition by CenturyLink, Level 3's debt instrument ratings are expected to survive at their prevailing levels and, in the intervening period, Moody's expects Level 3's solid performance to continue.

Level 3's liquidity is assessed as good, SGL-2, based on expectations of free cash flow of about $1 billion over the next year and the company having a December 31, 2016 cash balance of $1.8 billion. Moody's expects a telecommunications company of Level 3's stature to maintain liquidity of between 10% and 15% of its revenues, indicating that Moody's views the entirety of the company's cash position as being integral to its liquidity. That said, with no debt maturities until 2018 and with no financial covenants to comply with, the combination of the cash on hand and cash to be generated over the next year provide good liquidity.

Rating Outlook

The ratings outlook is stable because Level 3's instrument ratings are, based on existing deal parameters, expected to remain unchanged following the company's acquisition by CenturyLink and, in the intervening period, ratings are supported by Level 3's ongoing solid performance and leverage of debt/EBITDA trending towards 3.75x.

What Could Change the Rating -- Up

• Continued solid operating performance and margin expansion

• Solid liquidity arrangements

• Leverage of Debt/EBITDA approaching 3.5x on a sustainable basis (4.2x at 30Sep16)

• Free Cash Flow/Debt approaching 10% on a sustainable basis (7.7% at 30Sep16)

What Could Change the Rating -- Down

• Debt/EBITDA sustained above 4.5x (4.2x at 30Sep16)

• Free Cash Flow/Debt sustained below 5% (7.7% at 30Sep16)

• Deteriorating business performance including elevated churn and integration set-backs

• Weaker liquidity arrangements

The principal methodology used in this rating was Telecommunications Service Providers published in January 2017. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

Corporate Profile

Headquartered in Broomfield, Colorado, Level 3 Communications, Inc. (Level 3) is a publicly traded international communications company with one of the world's largest long-haul communications and optical Internet backbones. Level 3's 2017 revenue is expected to be approximately $9.1 billion and annual (Moody's adjusted) EBITDA to be $3.3 billion.

REGULATORY DISCLOSURES

For ratings issued on a program, series or category/class of debt, this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series or category/class of debt or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the credit rating action on the support provider and in relation to each particular credit rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on www.moodys.com.

For any affected securities or rated entities receiving direct credit support from the primary entity(ies) of this credit rating action, and whose ratings may change as a result of this credit rating action, the associated regulatory disclosures will be those of the guarantor entity. Exceptions to this approach exist for the following disclosures, if applicable to jurisdiction: Ancillary Services, Disclosure to rated entity, Disclosure from rated entity.

The rating has been disclosed to the rated entity or its designated agent(s) and issued with no amendment resulting from that disclosure.

Moody's has not provided advisory services but may have provided Ancillary or Other Permissible Service(s) to the rated entity, its related third parties and/or the party that requested the rating within the past two years (including during the most recently ended fiscal year). Please see the special report "Ancillary or other permissible services provided to entities rated by MIS's credit rating agency in Canada" on the ratings disclosure page www.moodys.com/disclosures on our website for further information.

Regulatory disclosures contained in this press release apply to the credit rating and, if applicable, the related rating outlook or rating review.

Please see www.moodys.com for any updates on changes to the lead rating analyst and to the Moody's legal entity that has issued the rating.

Please see the ratings tab on the issuer/entity page on www.moodys.com for additional regulatory disclosures for each credit rating.

Bill Wolfe
Senior Vice President
Corporate Finance Group
Moody's Canada Inc.
70 York Street
Suite 1400
Toronto, ON M5J 1S9
Canada
(416) 214-1635

Donald S. Carter, CFA
MD - Corporate Finance
Corporate Finance Group
(416) 214-1635

Releasing Office:
Moody's Canada Inc.
70 York Street
Suite 1400
Toronto, ON M5J 1S9
Canada
(416) 214-1635

MOODY'S
INVESTORS SERVICE

S&P Global
Ratings

RatingsDirect®

Level 3 Financing Issue Ratings Raised And Taken Off UCO On Updated Recovery Criteria

Primary Credit Analyst:
Scott B Tan, CFA, New York 212-438-4162; scott.tan@spglobal.com

Secondary Contact:
Allyn Arden, CFA, New York (1) 212-438-7832; allyn.arden@spglobal.com

NEW YORK (S&P Global Ratings) Dec. 19, 2016--S&P Global Ratings said today that it has reviewed its recovery and issue-level ratings for Level 3 Communications Inc. that were labeled as "under criteria observation" (UCO) after publishing its revised recovery ratings criteria on Dec. 7, 2016. With our criteria review complete, we are removing the UCO designation from these ratings and raising the issue-level rating on all of the company's secured debt at subsidiary Level 3 Financing to 'BBB-' from 'BB+' and all of the company's unsecured debt at subsidiary Level 3 Financing to 'BB-' from 'B+'. Since the issue-level ratings for both the secured and unsecured debt at Level 3 Financing are now raised and we don't expect further improvement, we are removing all ratings from CreditWatch, where we had placed them with positive implications on Oct. 31, 2016 following the announced acquisition by CenturyLink. We are also affirming the 'B+' issue-level rating on the unsecured debt at Level 3 Communications.

We revised our recovery rating on Level 3 Financing's secured debt to '1' from '2'. The '1' recovery rating indicates our expectation for very high (90%-100%) recovery in the event of payment default. We revised the recovery rating on the company's unsecured debt at Level 3 Financing to '5' from '6'. The '5' recovery rating indicates our expectation for modest (30%-50%; lower half of range) recovery in the event of payment default. There is no change to the '6' recovery rating on the unsecured debt at Level 3 Communications. The '6' recovery rating indicates our expectation for negligible (0%-10%) recovery in the event of payment default.

These rating actions stem solely from the application of our revised recovery criteria and do not reflect any change in our assessment of the corporate credit ratings for issuers of the affected debt issues.

RELATED CRITERIA

- Criteria - Corporates - General: Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

RELATED RESEARCH

RATINGS LIST

Rating Actions Due To Revised Recovery Rating Criteria For Speculative-Grade Corporate Issuers

Issue Ratings Raised And Removed From CreditWatch; Recovery Ratings Revised

Level 3 Financing Inc.

	To	From
Senior secured	BBB-	BB+/Watch Pos
Recovery rating	1	2H
Senior unsecured	BB-	B+/Watch Pos
Recovery rating	5L	6

Issue Ratings Affirmed; Recovery Ratings Unchanged

Level 3 Communications Inc.

Senior unsecured	B+
Recovery rating	6

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com and at www.spcapitaliq.com. All ratings affected by this rating action can be found on the S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

Attachment 7

Application of Level 3 – Attachment 7

911 Coordinator List

Date Data Gathered:	1/26/14
Level 3 Contact:	Stephanie Borowicz
Conducted with:	Bill Brown

FCC ID:	5915
PSAP Name:	Northumberland County Department of Public Safety
County, ST:	Northumberland, PA

PSAP Contact Name:	Mr. Bill Brown
Title:	9-1-1 Coordinator
Direct Line:	570-988-4441
Email:	bill.brown@norrycopa.net
Comments:	Bill Brown's "contact phone" should be 570-988-4441 in place of 570-988-4439. Notified PSAP Pro

Selective Router:

Selective Router Provider: LEC/Consultant/PSAP, etc.)	
Selective Router Name:	
Comments:	LEC Ref says: Verizon Bloomsburg and Scranton Verizon online guide says: Northumberland County 5915 Bloomsburg Scranton

Date Data Gathered:	1/19/15
Level 3 Contact:	Stephanie Borowicz
Conducted with:	Patti Gibbons via email

FCC ID:	5923
PSAP Name:	Schuylkill County Office Of Public Safety
County, ST:	Schuylkill, PA

PSAP Contact Name:	Mr. Scott Krater
Title:	9-1-1 Director
Direct Line:	570-621-9911
Email:	skrater@co.schuylkill.pa.us

Backup Name:	Patti Gibbons
Title	Essential Management Solutions LLC
Backup Direct Line	215 692-2344
Backup Email:	PMG@emsolutionsllc.net

Selective Router:

Selective Router Provider: LEC/Consultant/PSAP, etc.)	Verizon
Selective Router Name:	Bloomsburg and Scranton
Comments:	LEC Ref says: Verizon Bloomsburg and Scranton Verizon online guide says: Schuylkill County FCC ID 5923 Bloomsburg Scranton

Attachment 8

#	State	Entity (eff 3-12--08 with Delaware SOS)
1	Alabama	tw telecom of alabama llc
2	Arizona	tw telecom of arizona llc
3	Arkansas	tw telecom of arkansas llc
4	California	tw telecom of california l.p.
5	Colorado	tw telecom of colorado llc
6	Connecticut	tw telecom data services llc
7	Delaware	tw telecom data services llc
8	District of Columbia	tw telecom of d.c. llc
9	Florida	tw telecom of florida l.p.
10	Georgia	tw telecom of georgia l.p.
11	Hawaii	tw telecom of hawaii l.p.
12	Idaho	tw telecom of idaho llc
13	Illinois	tw telecom of illinois llc
14	Indiana	tw telecom of indiana l.p.
15	Iowa	tw telecom of iowa llc
16	Kansas	tw telecom of kansas city llc
17	Kentucky	tw telecom of kentucky llc
18	Louisiana	tw telecom of louisiana llc
19	Maine	tw telecom data services llc
20	Maryland	tw telecom of maryland llc
21	Massachusetts	tw telecom data services llc
22	Michigan	tw telecom data services llc
23	Minnesota	tw telecom of minnesota llc
24	Mississippi	tw telecom of mississippi llc
25	Missouri	tw telecom of kansas city llc
26	Montana	tw telecom data services llc
27	Nebraska	tw telecom data services llc
28	New Hampshire	tw telecom data services llc
29	New Jersey	tw telecom of new jersey l.p
30	New Mexico	tw telecom of new mexico llc
31	New York	tw telecom of new york l.p.
32	Nevada	tw telecom of nevada llc
33	North Carolina	tw telecom of north carolina l.p.
34	North Dakota	tw telecom data services llc
35	Ohio	tw telecom of ohio llc
36	Oklahoma	tw telecom of oklahoma llc
37	Oregon	tw telecom of oregon llc
38	Pennsylvania	tw telecom data services llc
39	Rhode Island	tw telecom data services llc
40	South Carolina	tw telecom of south carolina llc
41	South Dakota	tw telecom data services llc
42	Tennessee	tw telecom of tennessee llc
43	Texas	tw telecom of texas llc
44	Utah	tw telecom of utah llc
45	Vermont	tw telecom data services llc
46	Virginia	tw telecom of virginia llc
47	Washington	tw telecom of washington llc
48	West Virginia	tw telecom data services llc
49	Wisconsin	tw telecom of wisconsin l.p.

50	Wyoming	tw telecom data services llc
	Corporate	tw telecom inc.
	Corporate	tw telecom holdings inc.
	Corporate	tw telecom management co. llc
	Corporate	tw telecom l.p.
	Corporate	tw telecom holdings II llc

Entity (old)
Time Warner Telecom of Alabama LLC
Time Warner Telecom of Arizona LLC
Time Warner Telecom of Arkansas LLC
Time Warner Telecom of California, L.P.
Time Warner Telecom of Colorado LLC
Time Warner Telecom Data Services LLC
na
Time Warner Telecom of D.C. LLC
Time Warner Telecom of Florida, L.P.
Time Warner Telecom of Georgia, L.P.
Time Warner Telecom of Hawaii, L.P.
Time Warner Telecom of Idaho LLC
Time Warner Telecom of Illinois LLC
Time Warner Telecom of Indiana, L.P.
na
Time Warner Telecom of Kansas City LLC
Time Warner Telecom of Kentucky LLC
Time Warner Telecom of Louisiana LLC
na
Time Warner Telecom of Maryland LLC
Time Warner Telecom Data Services LLC
na
Time Warner Telecom of Minnesota LLC
Time Warner Telecom of Mississippi LLC
Time Warner Telecom of Kansas City LLC
na
na
na
Time Warner Telecom of New Jersey, L.P.
Time Warner Telecom of New Mexico LLC
Time Warner Telecom - NY, L.P.
Time Warner Telecom of Nevada LLC
Time Warner Telecom of North Carolina, L.P.
na
Time Warner Telecom of Ohio LLC
Time Warner Telecom of Oklahoma LLC
Time Warner Telecom of Oregon LLC
Time Warner Telecom Data Services LLC
na
Time Warner Telecom of South Carolina LLC
na
Time Warner Telecom of the Mid-South LLC
Time Warner Telecom of Texas LLC
Time Warner Telecom of Utah LLC
na
Time Warner Telecom of Virginia LLC
Time Warner Telecom of Washington LLC
na
Time Warner Telecom of Wisconsin, L.P.

na
Time Warner Telecom Inc.
Time Warner Telecom Holdings Inc.
Time Warner Telecom Management Co. LLC
TW Telecom, L.P. - reg in all states but PA ME CT
Time Warner Telecom Holdings II LLC