



*Fiber to the Premises (FTTP)  
PUC Integrity Management, Damage Prevention,  
and Corrosion Control Seminar  
State College, Pa  
Oct. 5<sup>th</sup> 2005*

# Overview



- What is FTTP?
- Benefits to customers
- Types of deployment
- Scope of Deployment in Pennsylvania
- Notification process
- Lessons Learned and Corrective Actions

# What is Fiber-to-the-Premise?



- FTTP is Verizon's next-generation broadband network that will deliver high-bandwidth Internet, voice and data services.
  - All-fiber network
  - Provided to both residences and businesses
- While Verizon has been using fiber-optic systems in our network for years, FTTP is a major enhancement, using next-generation technology to extend fiber all the way to residence and business customers' premises.
- Fiber infrastructure can be expanded in the future without typical need for additional street/road penetration.

# Benefits of technology



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## FTTP enables the Smart Home

Home security & monitoring systems  
Assisted living through remote awareness  
Telemedicine

Armchair travel  
"Kicked Up" telecommuting  
Network-based back-up & storage

Photo sharing



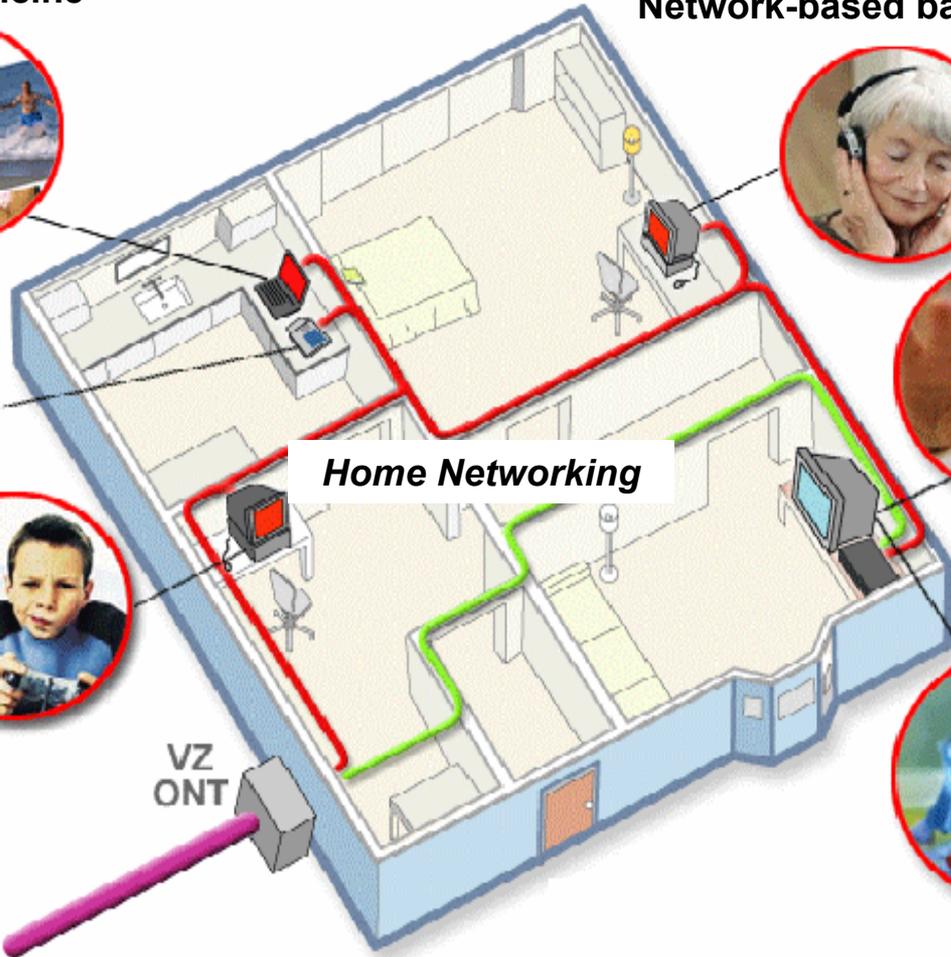
Video conferencing



Multi-player gaming



Home Networking



Music downloading



Home movies



Video on demand





## *Two types of fiber deployment*

### **Overlay**

- Overlay existing access network
- Customers transitioned to FTTP over time

### **Greenfield**

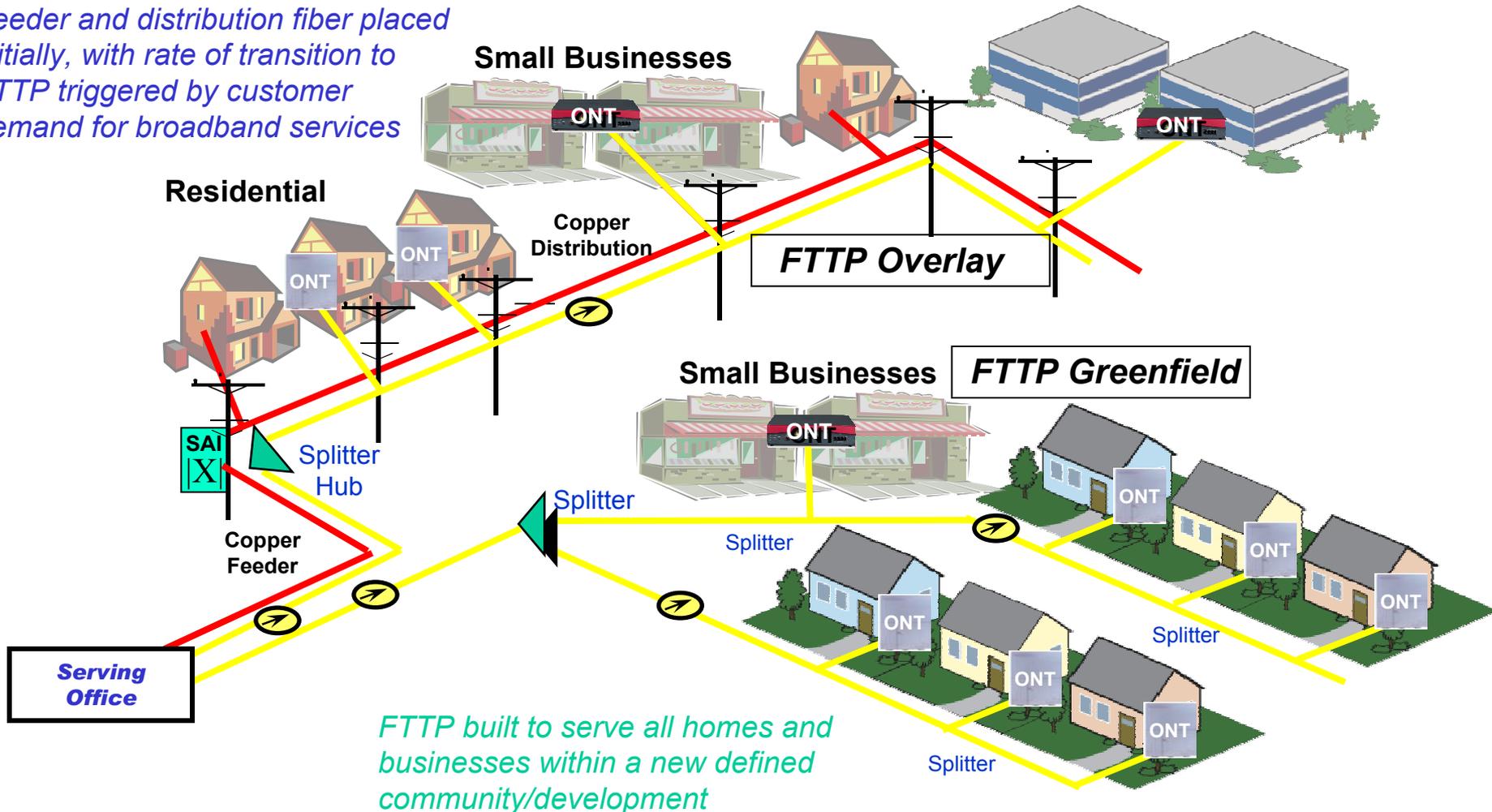
- FTTP deployed to serve all homes and businesses in new developments
- Developments can be a mix of Greenfield and Overlay

# FTTP Overlay and Greenfield Environments



## Fiber to the Premises

*Feeder and distribution fiber placed initially, with rate of transition to FTTP triggered by customer demand for broadband services*



# *Scope of Initial Backbone for the FTTP Deployment in PA*



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## ◆ **Path Creation Eastern PA**

- 5.4M Trench feet completed through August 2005
- 6.8M Total trench feet planned through December 2005
- 2006 Program is similar to 2005

## ◆ **Path Creation Western PA**

- 100K Trench feet completed through August 2005
- 500K Total trench feet planned through December 2005
- 2006 Program similar to 2005

# *Notification of Excavation Activities*



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- ◆ **Municipal meetings**
- ◆ **Design One-Call process**
- ◆ **Periodic One-Call contractor training meetings**
- ◆ **Periodic utility pre-construction meetings**
- ◆ **Mail notification to residents**
- ◆ **Door hangers**
- ◆ **Call before you Dig One-Call process**

# *Notification of Excavation Activities*



- ◆ **First Notification of Verizon FTTP Plan to**
  - **During the Engineering phase of the FTTP Project, Verizon sends a notice to meet Municipal Authorities that Verizon plans on doing construction for its FTTP Network in their territory**
- ◆ **Second Notification of Verizon's FTTP Plan**
  - **Verizon applies to the Municipalities for all applicable permits to allow Verizon to construct its facilities in the proposed build area**
  - **Verizon places Design Ticket with PA One Call System requesting plans of the Utility Owner's facility to minimize any potential conflicts between Verizon's proposed FTTP and existing facilities**
  - **If contacted, Verizon has met and will continue to have face-to-face meetings, upon request, with any major Utility Owners who has questions and/or concerns on the FTTP in the Utility Owners respective territory**

# *Notification of Excavation Activities*



- ◆ **Third Notification of Verizon's FTTP Plan to Utility Owners**
  - **Verizon schedules a pre-construction meeting through PA One Call**
    - **Verizon does strive to have this meeting 90 days in advance of the scheduled excavation, but other factors i.e. delay in the receipt of municipal permits and business requirements may necessitate Verizon to hold a pre-construction meeting <90 days before the scheduled excavation.**
    - **All Utility Owners in the affected Municipality, Labor and Industry, Pa One Call, and PUC Safety are invited to attend and participate in the pre-construction meetings.**
      - **Note: At this point, from the Municipal Notification and Design Tickets, all Utility Owners should have been informed of the FTTP build in their respective areas.**
- ◆ **Fourth Notification of Verizon's FTTP Plan to Utility Owners**
  - **Verizon submits a Excavation Ticket through the Pa One Call System**

# *Lessons Learned and Corrective Actions from Initial Deployment in Pa*

Fiber to the Premises



## ◆ ***Pennsylvania Lessons Learned:***

- Communications between Verizon, owners of utilities in the ROW, and Verizon's construction contractors is the key
- Utilities need to keep VZ informed of unique issues with their plant
- Build meetings gave all the chance to discuss issues, exchange notes, and exchange ways of communicating with each other
- Contractors received training from PA 1 call, along with the major utilities has also been a positive in minimizing damage to underground facilities

# Contractor Training in Eastern Pa



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# Contractor Training in Eastern Pa



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# *Lessons Learned and Corrective Actions from Initial Deployment in Pa*

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## ◆ **What Utility Owners can do to help:**

- Locate everything in the ROW including laterals
- Keep the lines of communication open with our contractors and our inspectors
- If unsure of where utilities are, let us know up front, just marking by map seems to be where most hits happen
- Attend the pre-construction meetings

# Thank You!

