

# Fiber to the Premise

## Targeting Multi-Dwelling Unit Buildings

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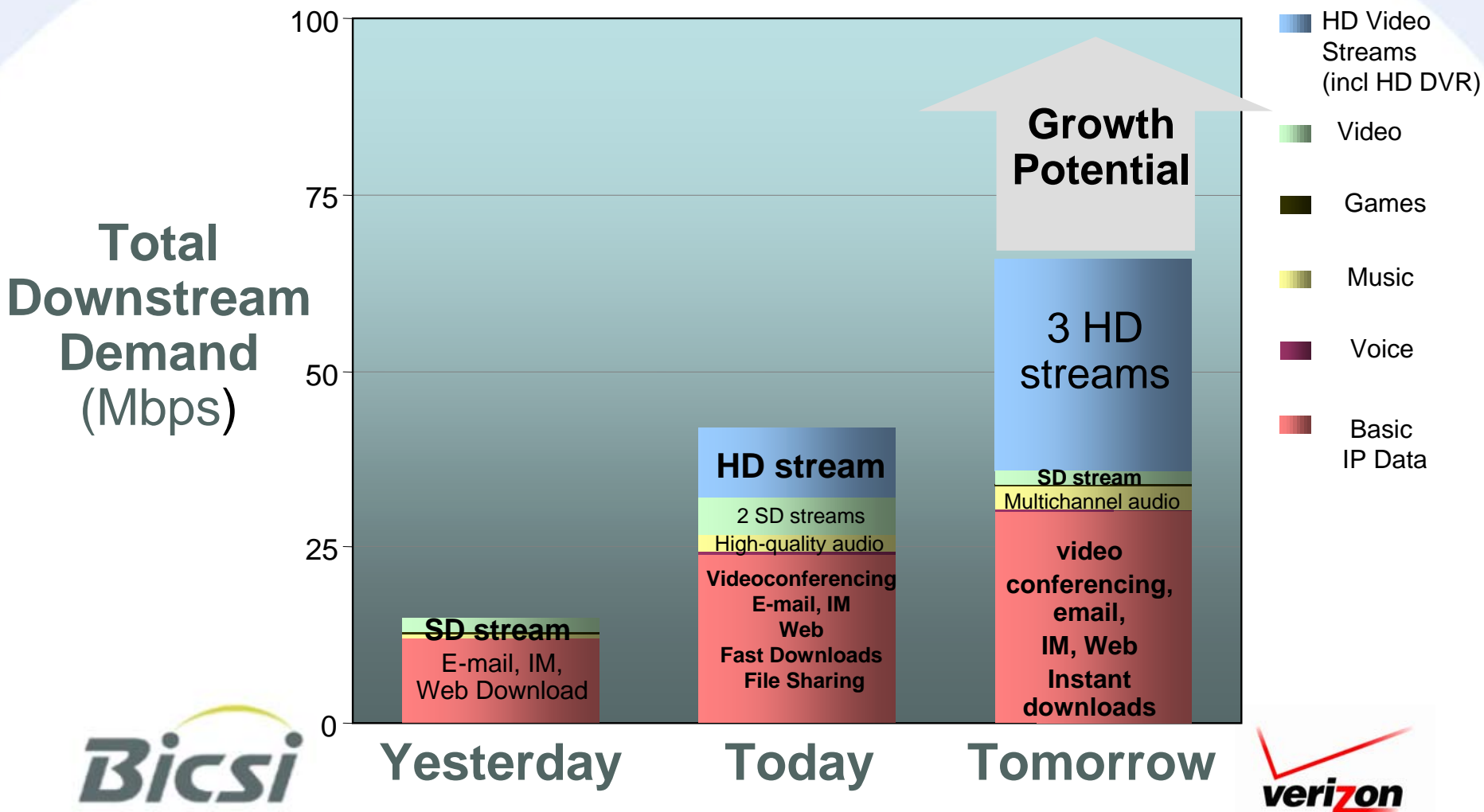
# Why Fiber to the Premises (FTTP)?

- **Competition:**
  - Verizon wants to be the Supplier of Choice for Voice, Data and Video service offerings
- **Future proof:**
  - Deployment of FTTP will provide unmatched capability to deliver bandwidth needed to support current and future service offerings
- **Quality:**
  - FTTP network will provide “Best in Class” service and reliability
- **Convenience:**
  - Consumers prefer the simplicity of dealing with one company for communication and entertainment needs



# Consumer Bandwidth Demand

Demand will soon outstrip current FTTC, FTTN or cable capacity... while FTTP has room for growth

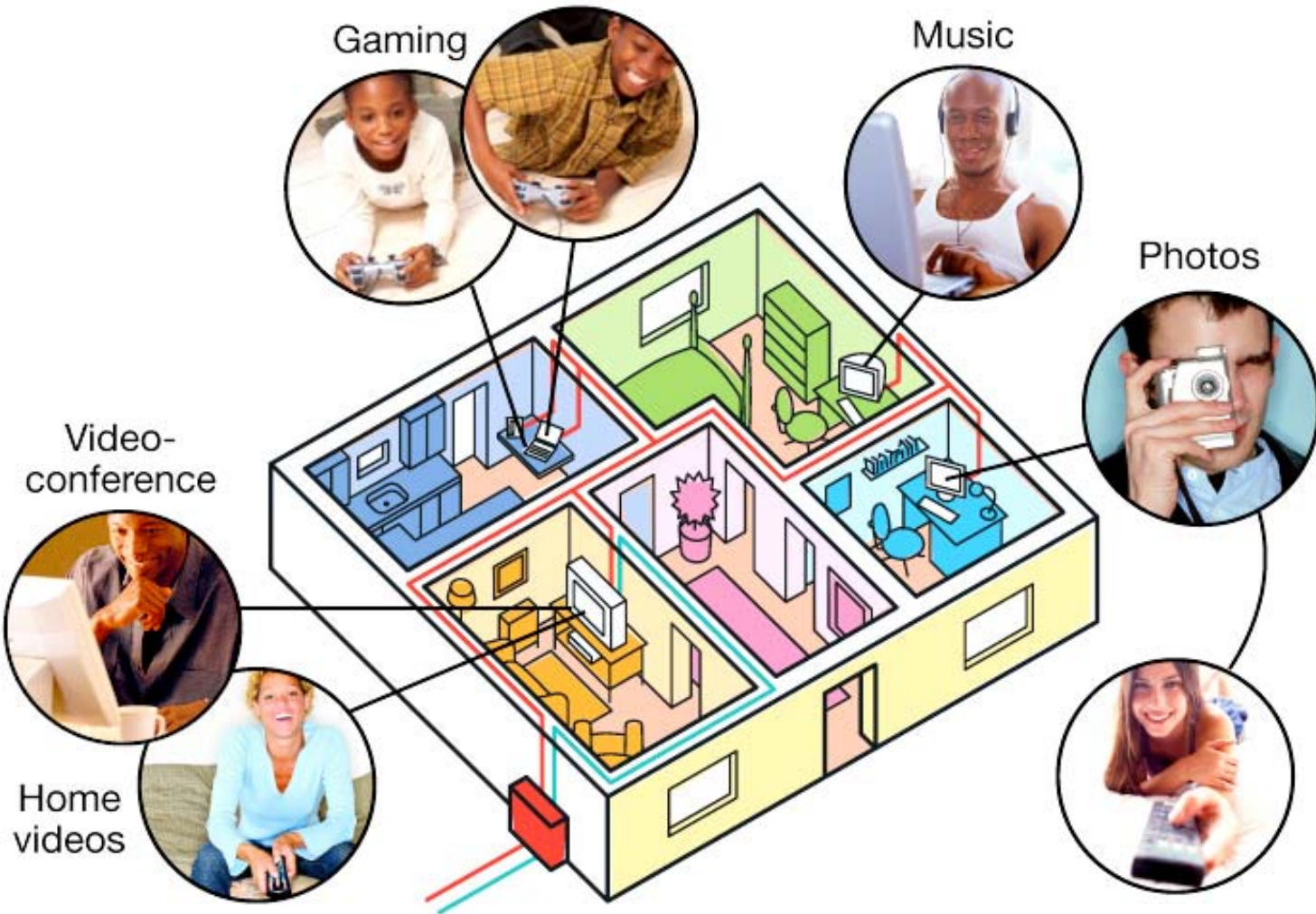


# Why MDU Owners Need FTTP?

- Differentiate your property!
  - Consumers are now including availability of Broadband service offerings as part of their housing selection process
  - Connect your building to the most cutting edge network available
  - Increased product and service offerings
- Provides Tenants Choice of Service Providers
- Maximize Revenue Opportunities
  - Rental income or purchase price
  - Increased ancillary revenue options
- Network Quality and Reliability
  - Improved end user satisfaction
  - Reduced maintenance problems = reduced calls/complaints to on site management



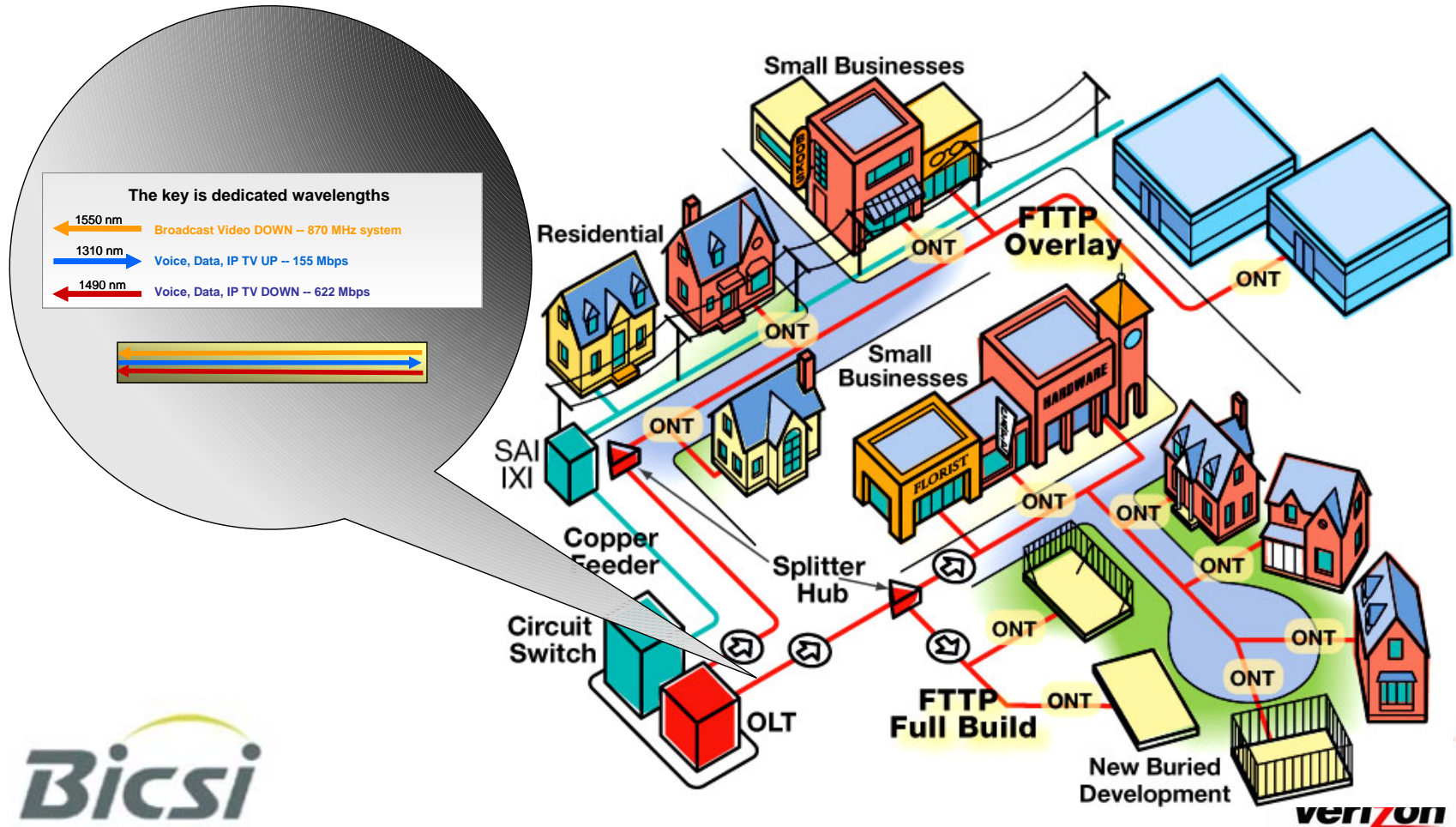
# Fiber Infrastructures allow for an integrated whole house solution - Future Proof





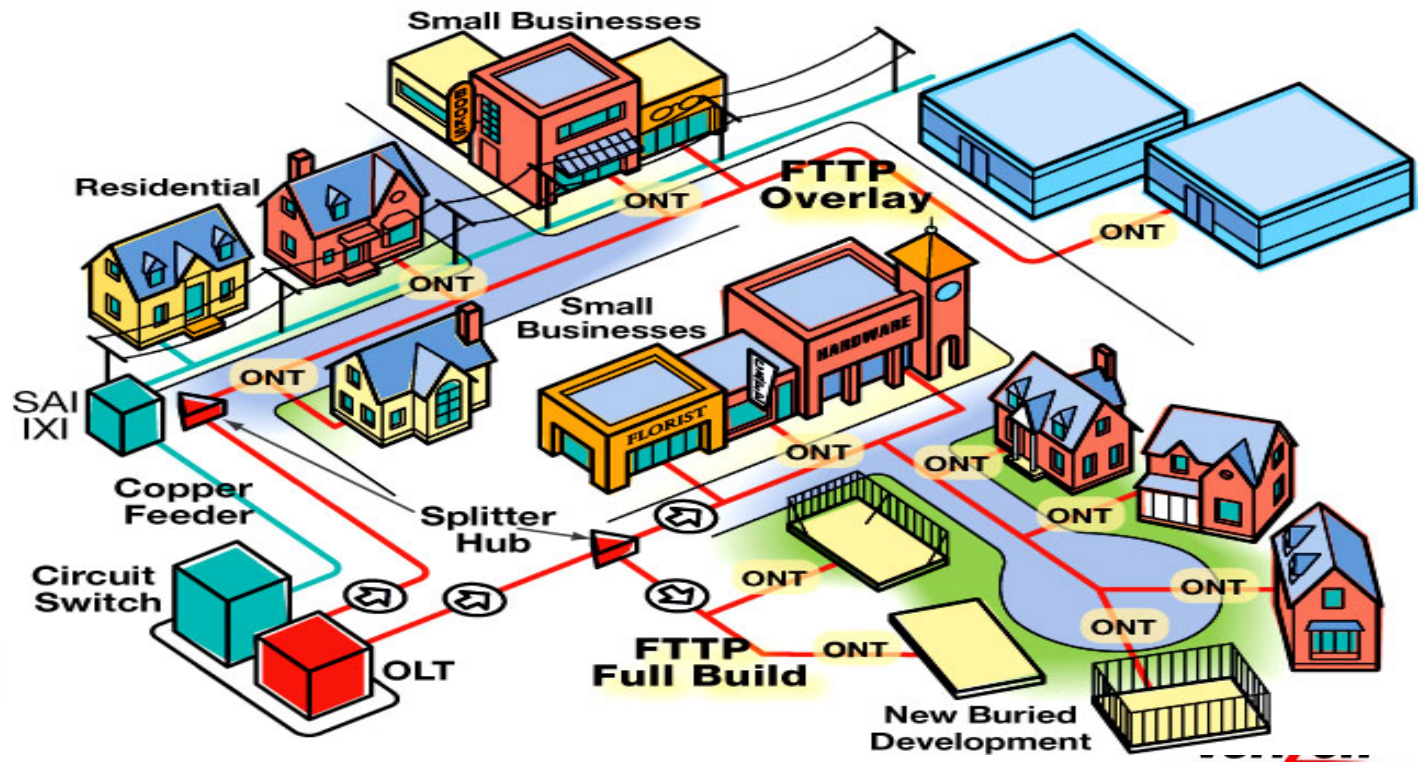
# What is Verizon FTTP Network?

- Cutting-edge fiber-optic technology and an infrastructure platform that offers significantly more bandwidth than copper or coax.

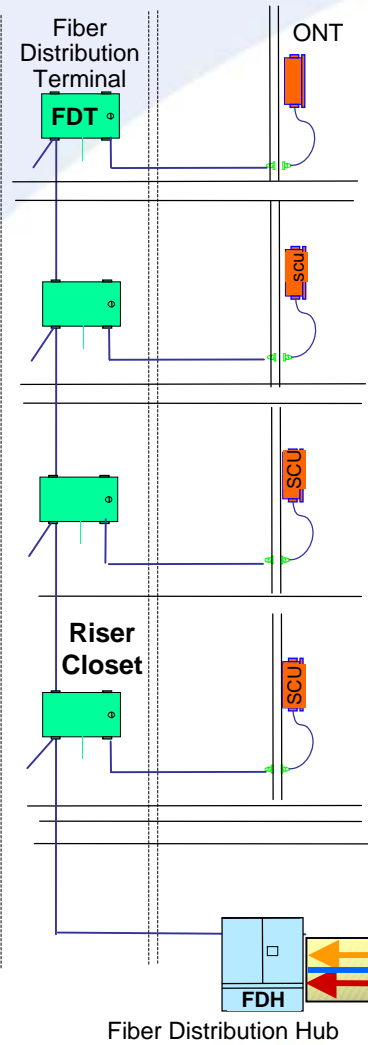


# What is Verizon FTTP Network?

- Cutting-edge fiber-optic technology and an infrastructure platform that offers significantly more bandwidth than copper or coax
- High-Speed Internet access, voice services, digital TV and HDTV channels, plus additional multiple value added amenities
- Great new choices in next generation Broadband amenity services:
  - Lightning-quick download of digital movie, games, music, etc.
  - Efficient, productive telecommuting and internet security features

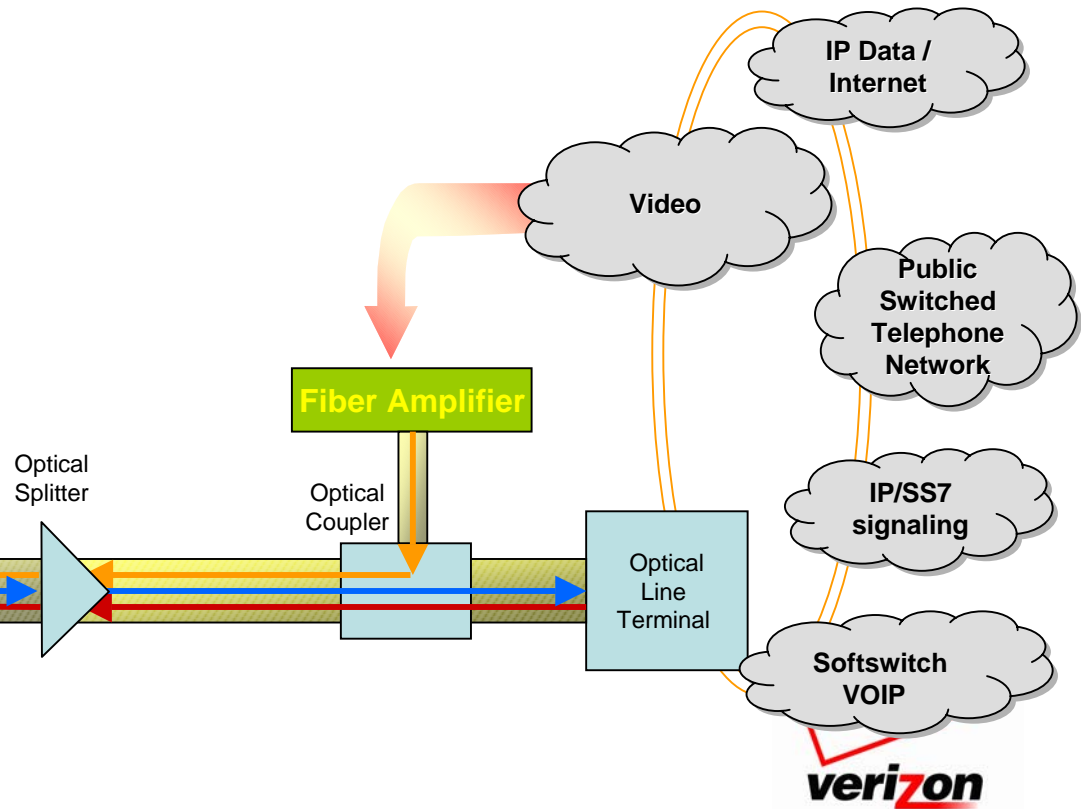


# FTTP Advantages



The key is dedicated wavelengths

- ← 1550 nm Broadcast Video DOWN -- 870 MHz system
- 1310 nm Voice, Data, IP TV UP -- 155 Mbps
- ← 1490 nm Voice, Data, IP TV DOWN -- 622 Mbps





# FTTP Network Impact to Structured Wiring

- FTTP Network is passive right into the living unit
- Compatible with typical living unit structured wiring designs
  - Dedicated Cat 5e for high speed data required
- Potential for reduction in house and riser structured wiring requirements
- Communicate with providers early in planning phase to ensure design requirements are captured in initial design plans
- Design structured wiring plans to allow for competition
  - Install meet points for use of Coax Cable Home Run Wiring and Coax Home Run Wiring
- Reusable pathways to provide access for fiber network
  - Greenfield Preferred: Microduct
  - Overlay: Microduct and Raceway Molding Systems
- Incorporate power requirements for OSPU and FMPS into low voltage plans

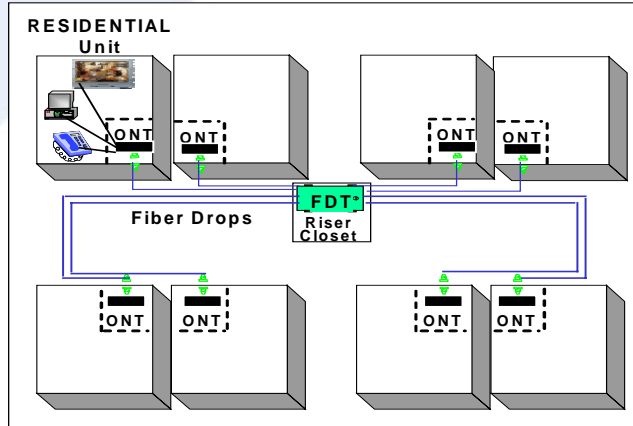


# Intra-Building Stack



# Single Customer ONT Design

Floor Plan



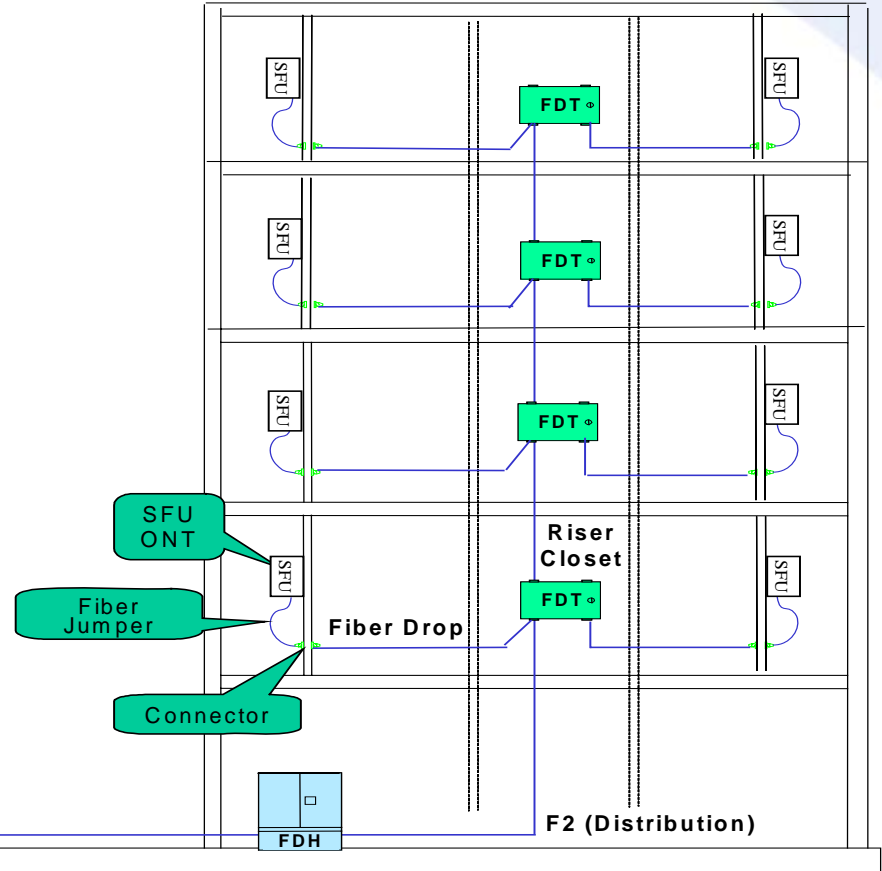
FDH (Fiber Distribution Hub): Optical splitter cabinet interconnecting F1 & F2 fibers.

FDT (Fiber Distribution Terminal): Interconnect for F2 and customer drop.

Connector: Located in hallway (Overlay) or living unit (Greenfield).

SFU ONT: Installed inside LU and connected to fiber drop via small fiber jumper.

— Fiber Cable



• Preferred Network Design

• Integrates with existing structured wiring within living unit



# Network Components



Fiber Distribution Hub



Fiber Distribution Terminal



MDU Fiber Drop

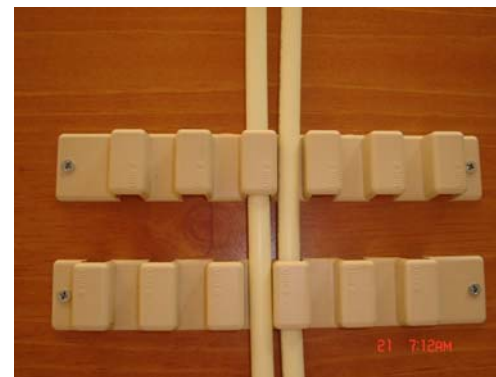
# Path Creation Methods- Raceway Molding Systems

- Small, flexible, inexpensive
- Plastic and Metal Systems
- Interior and Exterior Systems
- Laced with planned structured wiring bundles
- No added fire stopping requirements
- Provides scheduling flexibility for fiber drop placement
- Re-usable pathway provides maintenance solution

Ext Microduct



Int Microduct Organizer



## Approved Micro Duct Sizes OD/ID



12.7/10

8.5/6.0

**Durethane Micro Ducts**  
**with Silicore Lining**



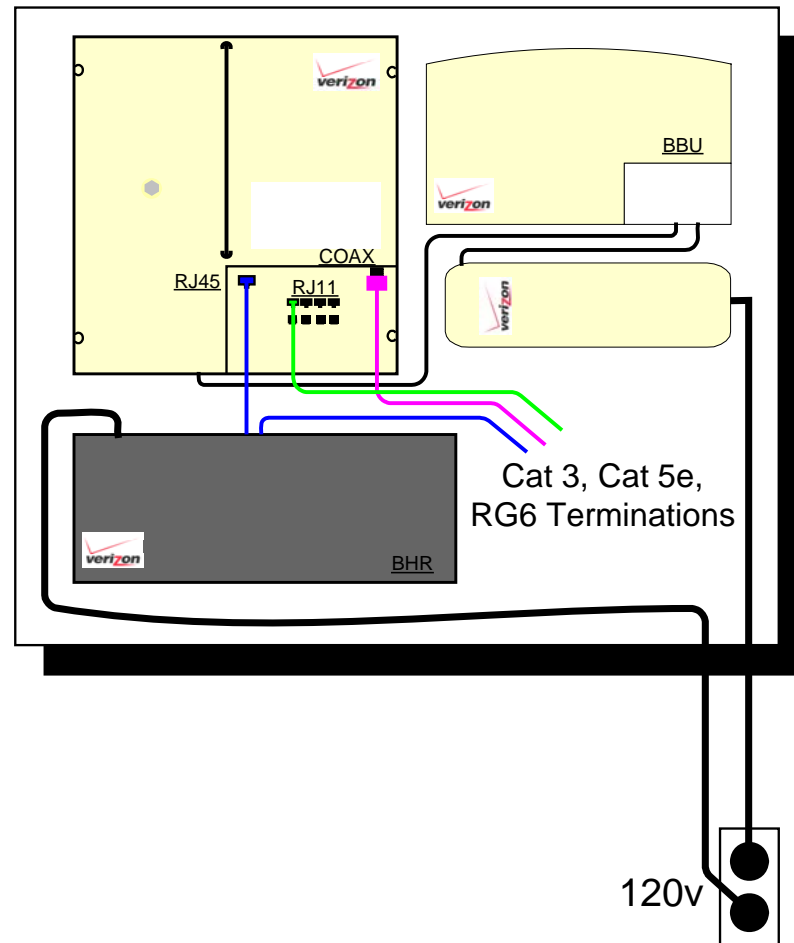
# Single Customer ONT –Surface Mount Option

## Surface Mount Option

*Illustration is representative only and is subject to change.*

### Flexible Mounting Options

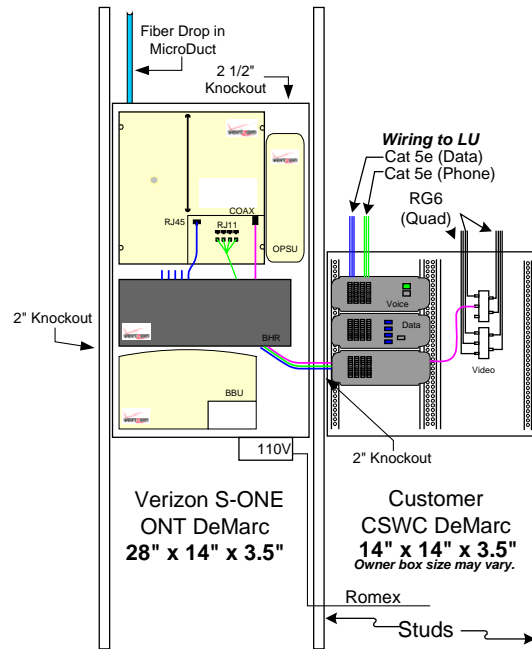
- BBU can be located 50' from ONT
- PS can be located up to 100' from ONT



# Single Customer ONT- Recessed Options

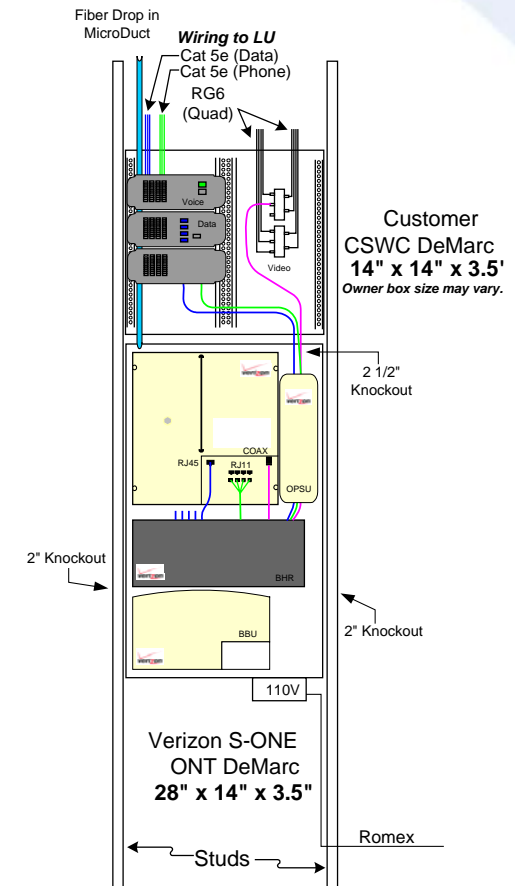
- No impact to rentable square footage
- Inconspicuous
- Integrates with planned customer structured wiring cabinet

## Recessed Options



### Horizontal Arrangement

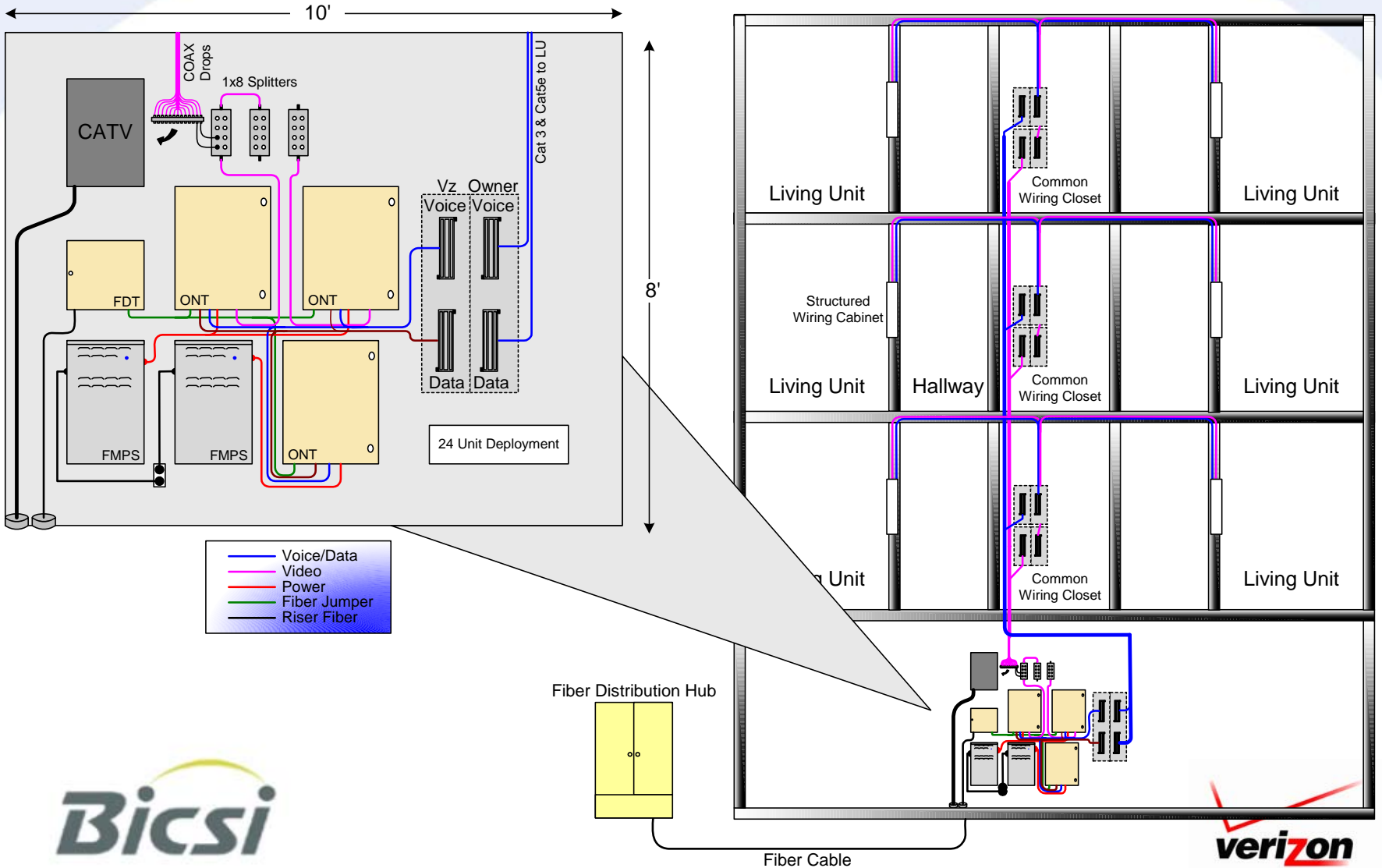
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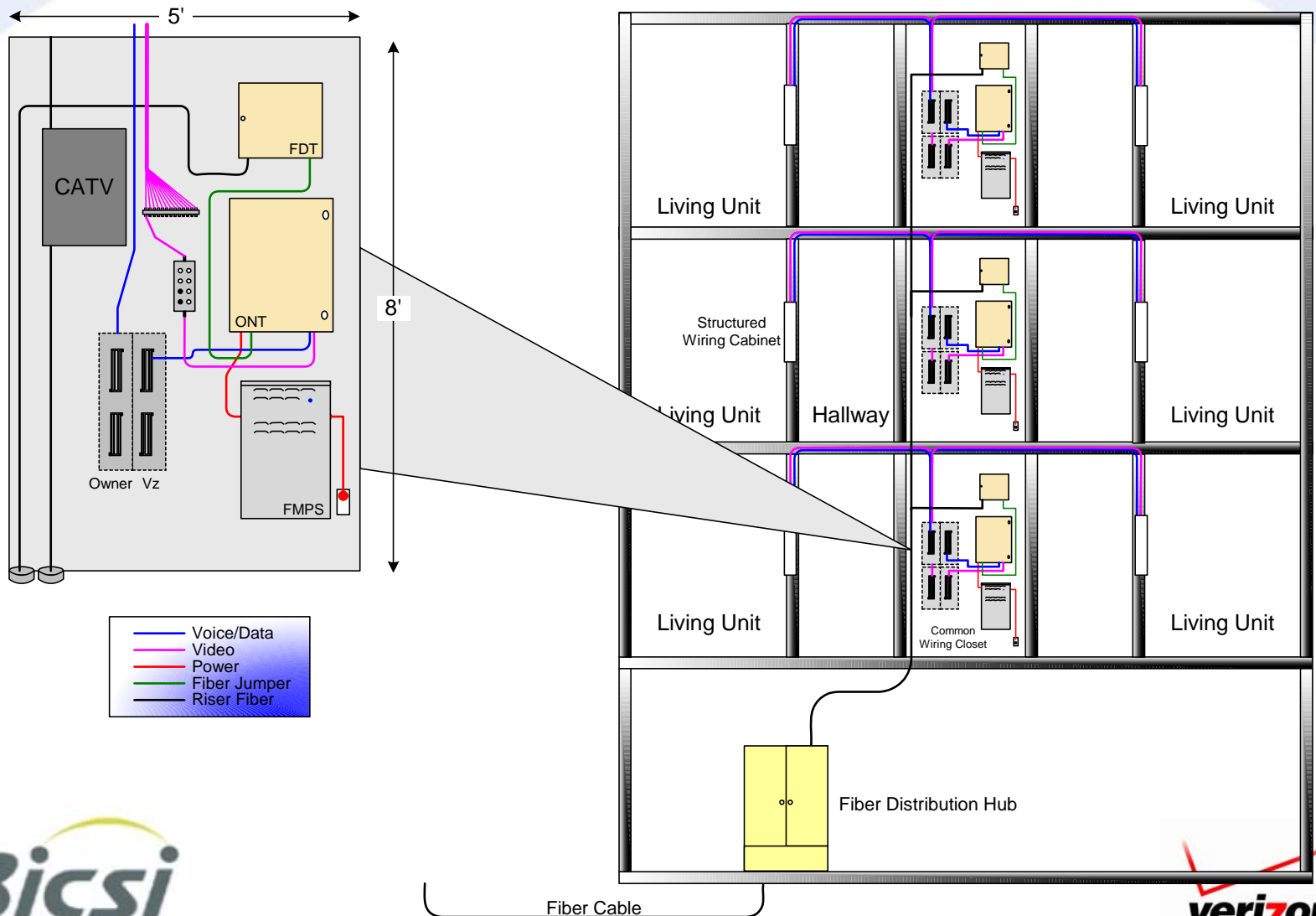
### Vertical Arrangement

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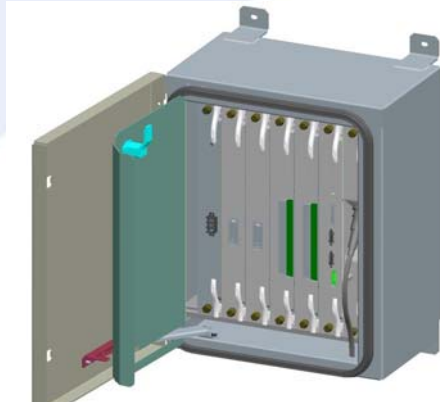
# Multi Customer ONT Centralized



# Multi Customer ONT Distributed



# Multi-Customer ONTs and FMPS



- Modular (up to 16 subs)
- 19"H x 15"W x 11"D
- 12/24 POTS
- 8/16 Ethernet or VDSL
- 34 dBmv video



- Fixed port (up to 8 subs)
- 23"H x 19"W x 4"D
- 16 POTS
- 8 Ethernet or VDSL
- 33 dBmv video



- 48V Power Solution
- 31"H x 14.5"W x 5.5"D
- 8x 12V 7.2 Ah SLA Batteries
- 150W Power
- Supports two MDU ONTs
- Wall mountable

**Bicsi**

**verizon**



Questions ??

Thank you for your time and attention.  
Please visit the many exhibits that are focused on the  
FTTP network buildout.

Have a great time at the Conference!!

