



**SNS COLLEGE OF
TECHNOLOGY**
Coimbatore-35
An Autonomous Institution



DEPARTMENT OF ELECTRONICS & COMMUNICATION

OPTICAL AND MICROWAVE ENGINEERING

III YEAR/ VI SEMESTER

UNIT 5 – OPTICAL NETWORKS

FTH



Content



- What is FTTH?
- Why FTTH?
- Where is the fiber?
- What's In It For Contractors?
- Conclusion



What is FTTH?



- **Fiber to the Home** or simply **FTTH** is a technology that uses optical fiber directly from the central point to the residential premises (as shown in the following image). It provides uninterrupted high-speed internet service. Here, “H” includes both home and small business.



Why FTTH?



- Enormous information carrying capacity
- Easily upgradeable
- Easy to install
- Allows fully symmetric services
- Covers very long distances
- Strong, flexible, and reliable
- Safe and secure
- Lower cost



Who Competes With Telcos In Implementing FTTx?

- Municipalities
- Utilities
- CLECs
- Private companies
- Battleground for telcos
and CATV companies





Where is the fiber?



- Where is the bulk of telephone cabling?
 - 10% is long distance
 - 10% is local loop (metropolitan)
 - 80% is subscriber loop
- Long distance and local loop are virtually all fiber
- Is FTTx just completing the system?



Why FTTx? Why Now?

- Telcos are suffering with aging copper cable plants
- Telcos are losing broadband customers to CATV and landline customers to cell phones and VoIP
- New services are becoming available to enhance revenue - and customers demand them
- Regulations changed sharing issues
- New technology (PON) and cheaper components makes FTTx cheaper



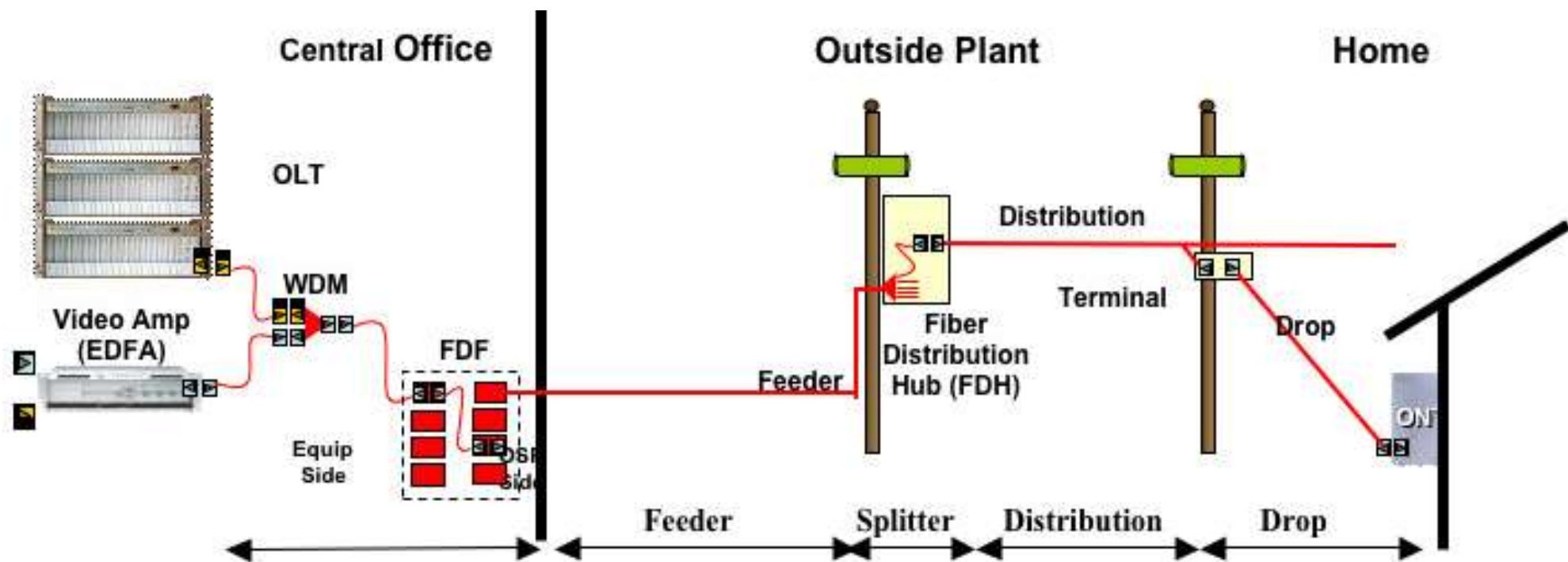


FTTx Architectures

- Home run - fiber from CO to every home
- Active star - local switch then fiber to every home
- Passive optical network (PON) - use splitter near customer share fiber to CO
- WDM PON - PON but with each customer having a specified wavelength
- All based on standard SM fiber



FTTP BPON Architecture (Verizon)





Conclusion

No one can deny that the FTTH has completely transformed the way of communication in recent years. It is going on the path to becoming a norm. If you have a query regarding the FTTH, then tell us in the comment section.



Reference

- www.google.com
- www.wikipedia.com
- www.studymafia.org



THANKS