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Technology Terms

- Speed
- Bandwidth
- Fiber
- Last mile

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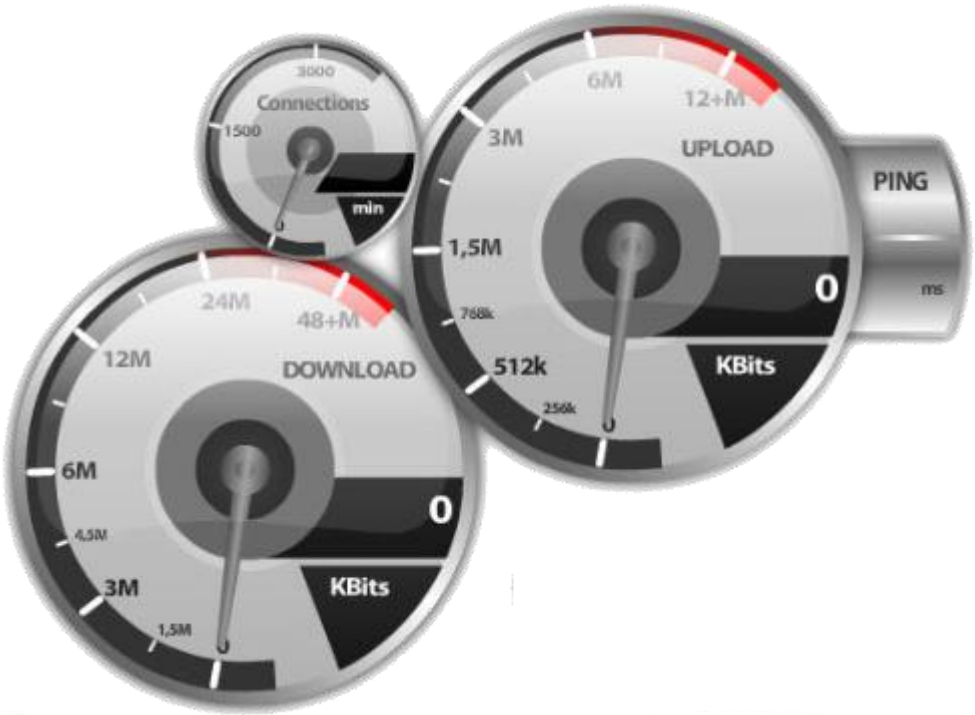
Measuring Speed

- **Speed**: refers to the rate at which the data is travelling
- **Bandwidth**: refers to the size of the conduit in which the data is travelling within



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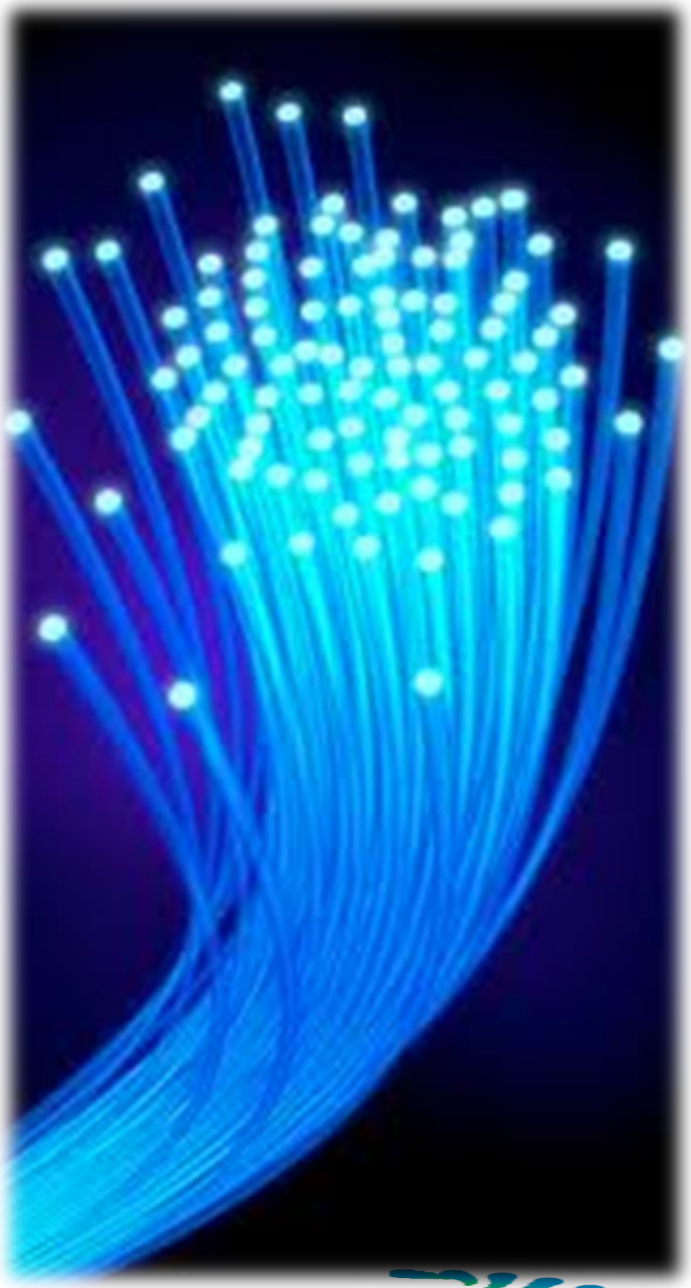
How Much Speed Do I Need?

Internet Speeds	Download 1 HD Movie (5 GB)	Download 5 songs (25 MB)	Upload 200 Photos (250 MB)
5 Mbps / 768 Kbps	2 hours 17 minutes	40 seconds	44 minutes 26 seconds
10 Mbps / 1 Mbps	1 hour 8 minutes	20 seconds	33 minutes 20 seconds
20 Mbps / 2 Mbps	36 minutes	10 seconds	16 minutes 40 seconds
30 Mbps / 5 Mbps	24 minutes	6 seconds	6 minutes 40 seconds
50 Mbps / 10 Mbps	14 minutes	4 seconds	3 minutes 20 seconds
100 Mbps / 20 Mbps	7 minutes	2 seconds	1 minute 40 seconds
1 Gbps/250 Mbps	40 seconds	Less than 1 second	8 seconds

Fiber

- Fine threads of glass in layers to create a medium for carrying data from one point to another.
- Features:
  - Physical smaller size
  - High bandwidth
  - Immunity to interference
  - Enhanced security
  - Declining costs
  - Shelf Life



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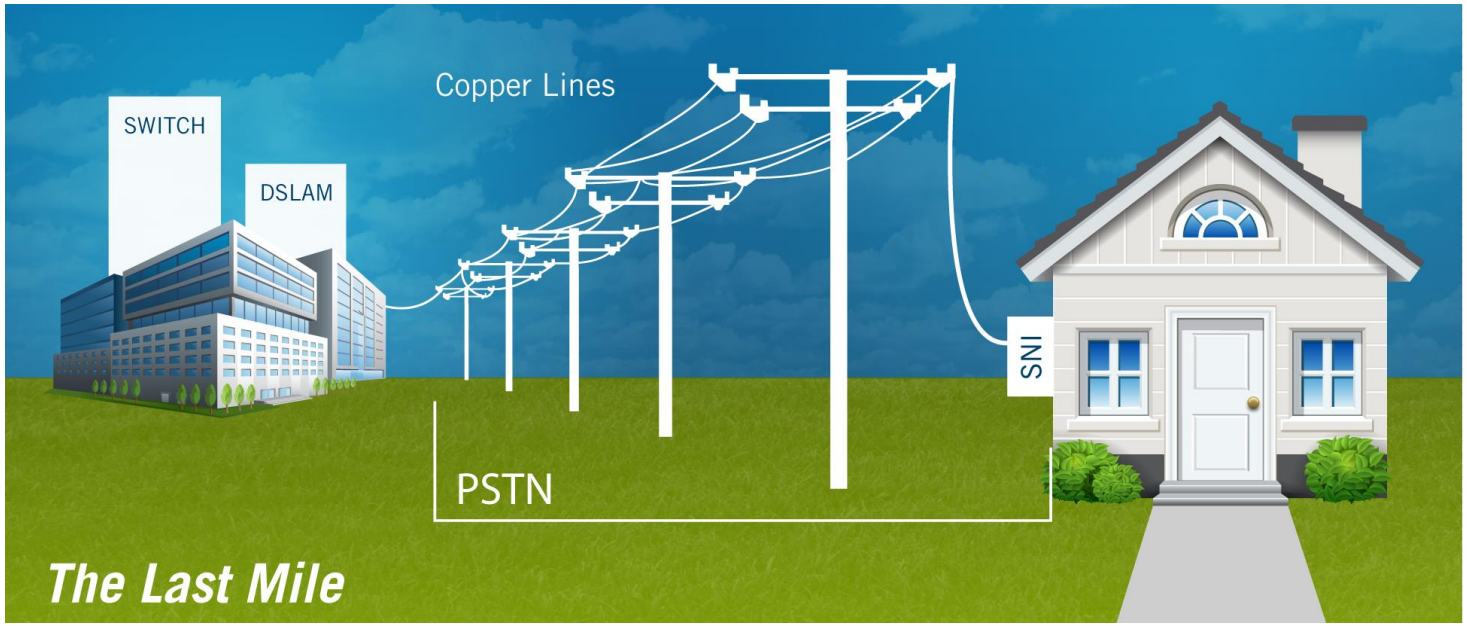
Last Mile

- Delivers connectivity between the telecommunications and/or cable company and the customer premise
- Comprised of copper, fiber, or coaxial cable.
- Dictates available service offerings

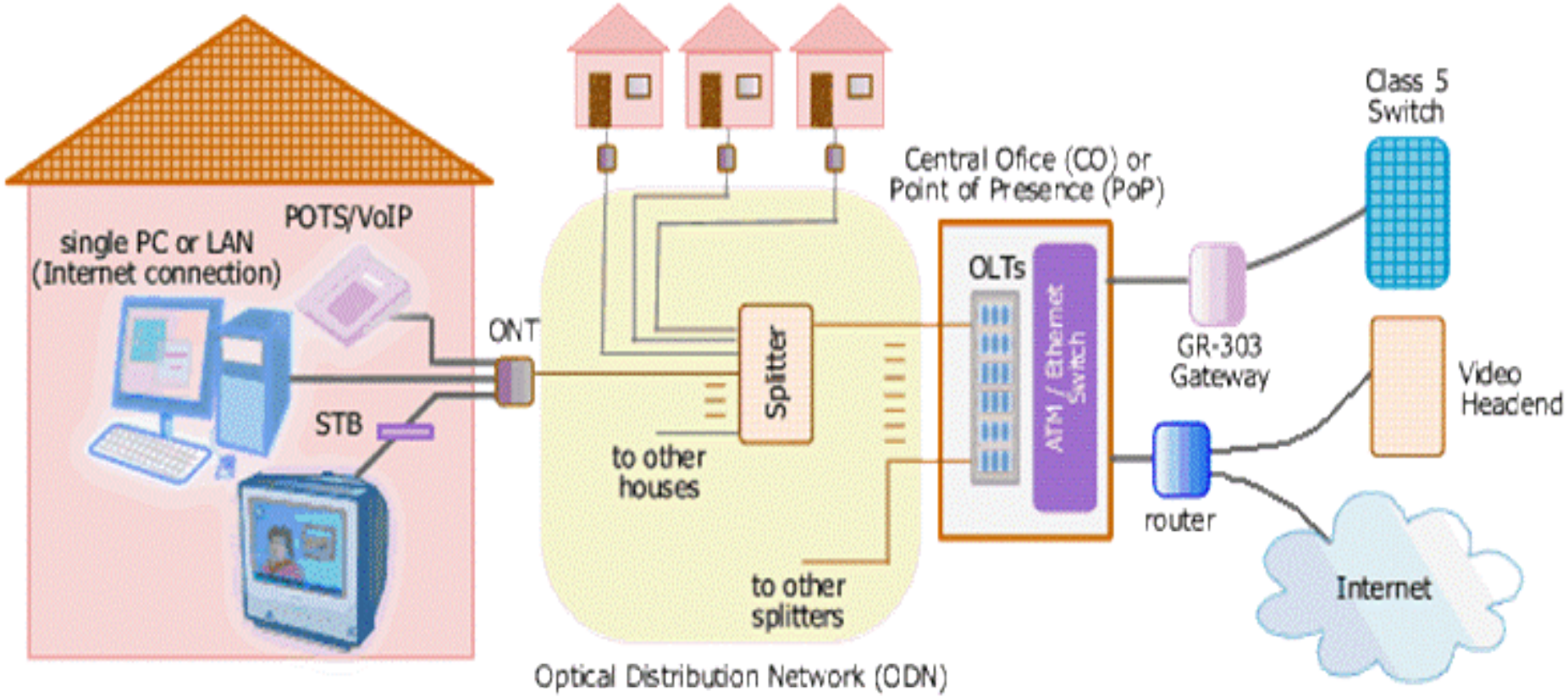


Introduction to Fioptics and Suite of Products

- Brand name of Cincinnati Bell's advanced Internet and TV network:
  - All Fioptics Video
  - All Fioptics 10Mb (and higher) High Speed Internet

- **Fioptics Phone** provides same customer experience of traditional voice service but is delivered as IP over fiber or via copper
- **Fioptics Internet** provides broadband internet that is up to 200 times faster than DSL
- **Fioptics TV** offers basic television, HD programming, and DVR Service

Fioptics Delivery



ONT and BACKUP

Fioptics are delivered over a fiber-to-the-home (FTTH) network using a **Gigabit Passive Optical Network** technology.

The **ONT** (Optical Network Terminal) splits the light signal into three separate parts: Voice, Video, and Internet.

A Battery Backup option is available to all FTTH customers for voice service. The battery provides 8 hours of stand-by time.

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Fioptics Internet Basics

- Asymmetrical speeds for uploads and downloads
- Six tiers of speed
  - 10 Mbps
  - 20 Mbps
  - 30 Mbps
  - 50 Mbps
  - 100 Mbps
  - 1 Gbps
- Dynamic or permanent IP addresses
  - Static IP addresses are available

How Fioptics TV Works

- Receive Channels via satellite feed.

- Channels are distributed to a Central Office using Fiber/IP.

How Fioptics TV Works (Cont.)

- Fiber fed from CO to cross-connect on the street.

- Fiber fed from street to a home or MDU.

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What Does This Mean for the Customer?

- **Fiber IPTV**
  - Up to 1 Gb Internet speed
  - Requires a Set Top Box (STB) on every TV
  - Land Line Phone service delivered via Fiber and converted to copper at the premises. Battery Backup is available.
- **Copper IPTV**
  - Up to 30-50 Mbps Internet speed
  - Requires a Set Top Box (STB) on every TV
  - Limited by last mile delivery
  - Traditional Land Line Phone service