FTTH vs. Fixed Wireless

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How Important is High Speed Internet?

38 million apartment renters nationwide

1.6 million more renters today than five years ago

WHAT APARTMENT RENTERS WANT

Renters seek amenities for every lifestyle. Here’s what they like, love, and can’t live without.

TOP 5 COMMUNITY AMENITIES:

- Parking: 94%
- Pool: 83%
- Fitness Center: 82%
- Secured Community Access: 80%
- Recycling: 80%

TOP 5 HOME AMENITIES:

- High-Speed Internet: 94%
- Walk-in Closet: 89%
- Soundproof Walls: 88%
- Patio or Balcony: 87%
- Washer/Dryer in Unit: 87%

nmhc.org/residents
Key Factors to Consider When Winning and Retaining Customers

- Customers are no longer transparent to what type of network a provider uses to deliver their services.
- Customers want four things from their provider
  1. A bill that where the price stays the same
  2. The services provided are stable and consistent
  3. Responsive support
  4. Mobility
What Type of Network Architecture?

FTTH? Hybrid? Wireless?
Network Evolution

- FTTC – Fiber To The Curb used the twisted pair in the last mile to deliver high speed bandwidth services
- FTTN – Fiber To The Node used coax in the last mile to deliver high speed bandwidth services
- Fixed wireless uses wireless technologies to deliver high speed bandwidth services
- Copper and coax have a difficult time keeping up with bandwidth demands. The copper world is now working on Category 8 cables, the 6th major upgrade since the 1990s
- After being introduced in 1997 with the capacity of 2 Mbps, customers using 802.11 Wireless Local Area Network (WiFi) standard have typically upgraded their modems multiple times in order to keep up with bandwidth demand
Why Fiber?

- Single-mode fiber has been the predominant type of fiber deployed in FTTH networks.
- Optical fiber was commercially introduced in the early to mid 1980s, and the basic design and construction has stayed the same.
- Fiber cables deployed in most networks during the 1980s are still commonly used today.
- Fiber technologies have significantly improved since the 1980s making fiber much more cost effective and easier to install today.
Fixed wireless is an attempt by providers to eliminate the portion of the network form the network access point (terminal) to the home. This is where the most cost is incurred when hooking up customers to a FTTH network. However is it the best option?

Fixed wireless example: **AT&T GFAST**

- Up to 150 Mb @ 1300 feet/400 meters = 10 pole spans (Roughly 40 homes served)
- Up to 1 Gig @ 230 feet/70 meters = 2 pole spans (Roughly 4 homes served)
Fixed Wireless Diagram

Router

Cell Tower
or
Small Cell

FDH
(Fiber Distribution Hub)

Rooftop antenna

Fiber Network
The Ideal Network Design

• Wireless and FTTH network integrated together
  – Would “future proof” the network for increasing bandwidth demands
  – Offers true 1 Gig service to customer premises
  – Consumers would have the ability to move seamlessly between the mobile and FTTH network

• The integrated network will address two factors that will always exist
  – Consumers will continue to demand higher bandwidth speeds
  – Consumers want the ability to be mobile
Tipping Point

70% of the total cost to build your network is labor

Capital - Material

Expense - Labor

$ LESS $

$ MORE $
Dissecting the Cost of a FTTH Network
YOURx™-Terminals are the network access points between the distribution cabinet and the homes. Rather than splicing in each NAP, pre-connectorized MPO cables are deployed to connect each YOURx-Terminal. On the drop side, deploy reels with 900um fiber plug into the terminal on one end and terminate at the TAP demarc point on the other end.
Modular Technology/Plug-and-Play/Fixed Wireless
Modular Technology/Plug-and-Play/Fixed Wireless
Blending of the FTTH and the Fixed wireless technologies futures proofs your network and gives the customers the mobility they demand.

Whatever your choice is the need for a fiber rich network is quickly becoming a reality.