

FCC Broadband Workshop

November 19, 2009

Joanne Hovis, President
Columbia Telecommunications Corp.



Local Governments and Fiber to the Home

- 57 municipal FTTP networks in the US
- Range of architectures, vendors, business models, technology choices
- Key is local decision-making and flexibility
 - in technology model
 - in business model (sometimes limited by anti-competitive state law)
- Emphasis on expanse and multiplicity of services, bandwidth, and affordability

Project Drivers and Technology Choices

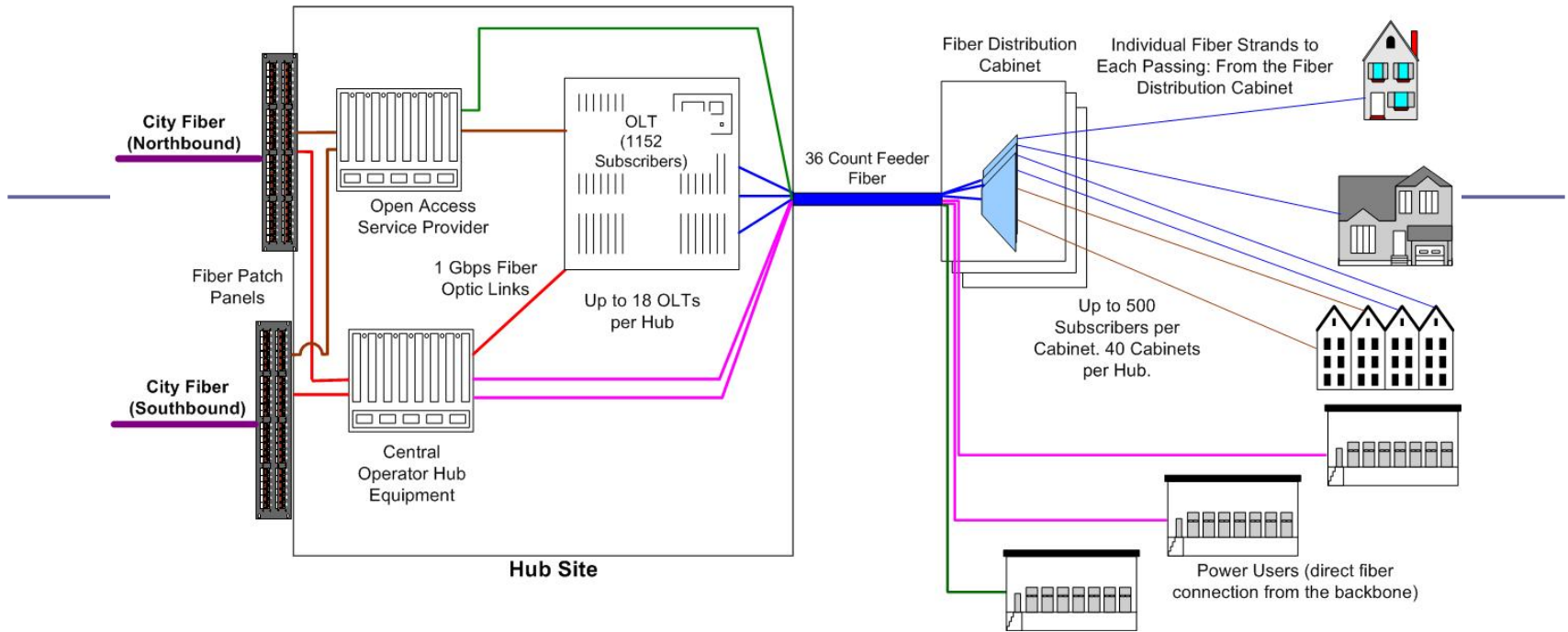
- Range of drivers
 - From economic development to local self-sufficiency
 - From education to public health
 - From environment protection to smart growth
- These drivers push toward technology models that emphasize breadth of coverage and high bandwidth
 - Residential use
 - Business use, small and large
 - Contrast for-profit drivers

FTTP Technology Choices

- Frequently framed as choice of point-to-point versus passive optical networking
- US munis have adopted both, following extensive review and evaluation
- Emerging understanding that either can facilitate:
 - multi-party use, openness at physical and electronics layers, competition
 - key is to build in flexibility but still allow for local decision-making

“Enhanced PON” considerations

- Emerging architecture under consideration for San Francisco
 - Emphasis has been on architecture that would support open access and competition
- Economies make PON more cost-effective
 - falling cost of hardware due to proliferation worldwide
 - increasing standardization of PON technologies potentially provides lower-risk upgrade path
 - significantly lower cost of PON outside plant constr.
 - reduced space requirements at each hub, enables more choice for locations and reduction of costs.
- “Enhanced” variation builds in flexibility for big users



- ❑ Retail openness options at router level (layer 3) and interface level (layer 2)
- ❑ Sufficient fiber to connect 7% of users over dedicated fiber and bypass GPON equipment (can increase with increase in constr. cost)
- ❑ *Because of need for central entity, openness always depends on governance*