



Transforming the Local Exchange and HFC Networks

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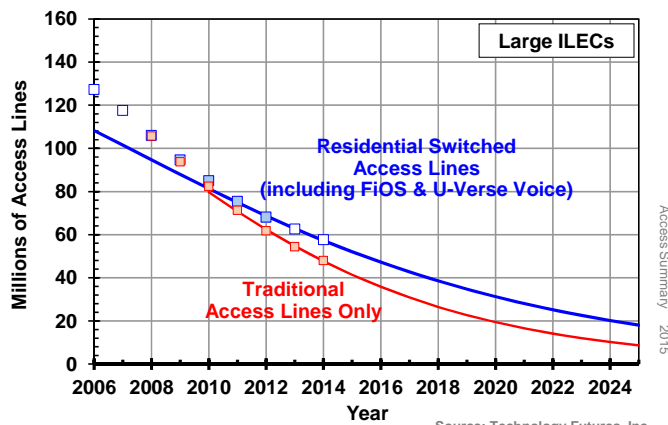
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Telco Local Exchange Networks



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Switched Access Lines – Three Largest ILECs



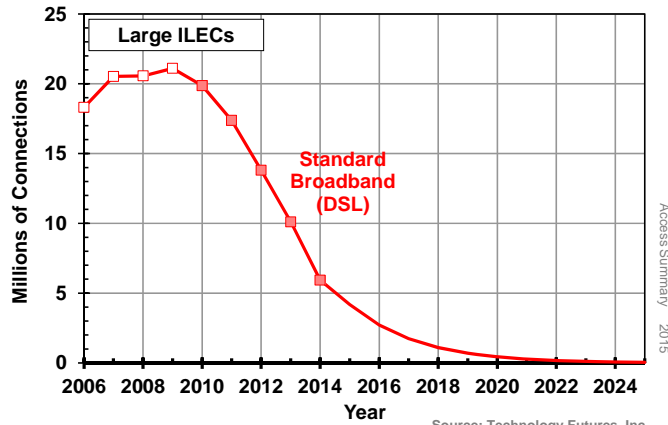
Access Summary / 2015

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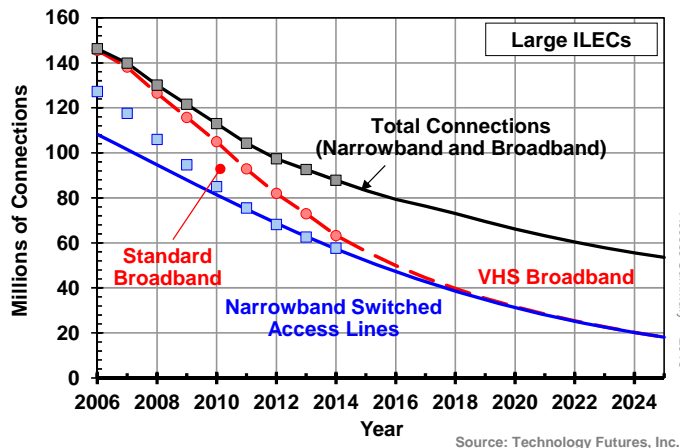
DSL Subscribers– Three Largest ILECs



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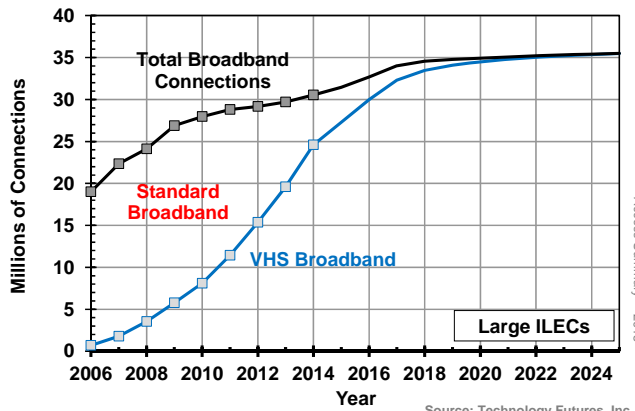
Total Connections – Three Largest ILECs - Updated



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Broadband Subscribers– Three Largest ILECs - Updated

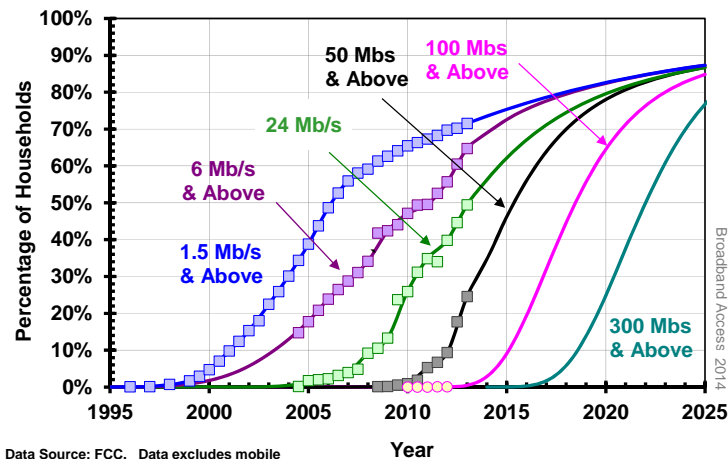


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Broadband Households by Nominal Data Rate (Jan 2015 View)



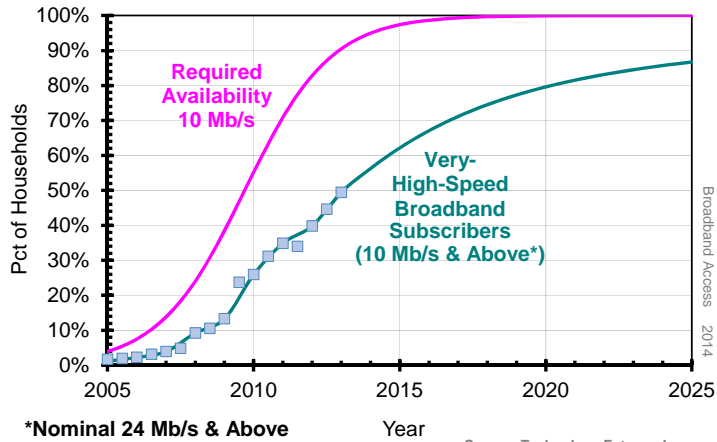
Data Source: FCC. Data excludes mobile wireless broadband

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Availability vs Subscribers, 10 Mb/s & Above - Updated



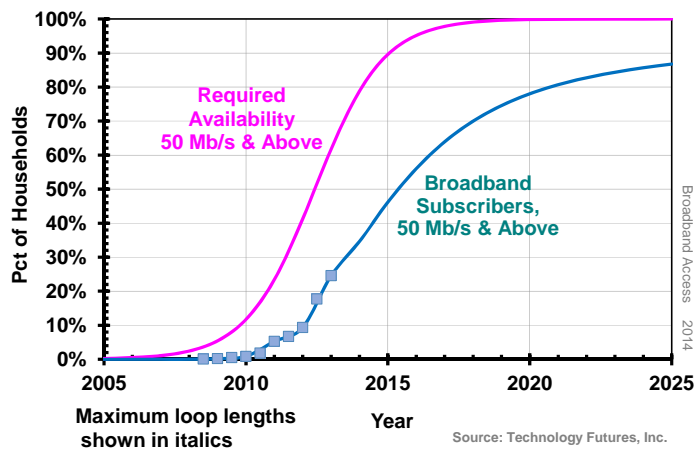
*Nominal 24 Mb/s & Above

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Availability vs Subscribers, 50 Mb/s & Above - Updated



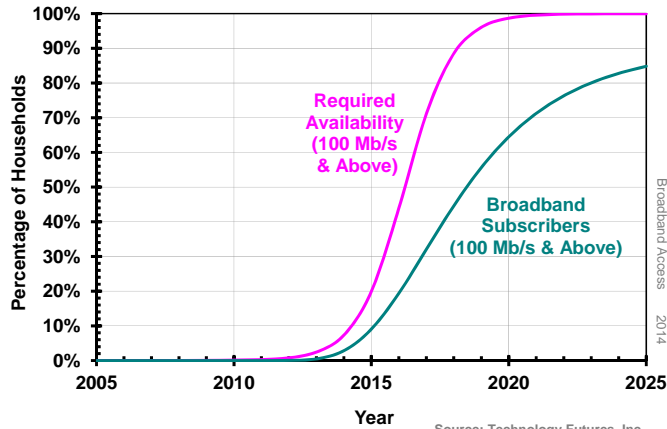
Maximum loop lengths shown in italics

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Availability vs Subscribers, 100 Mb/s & Above - Updated

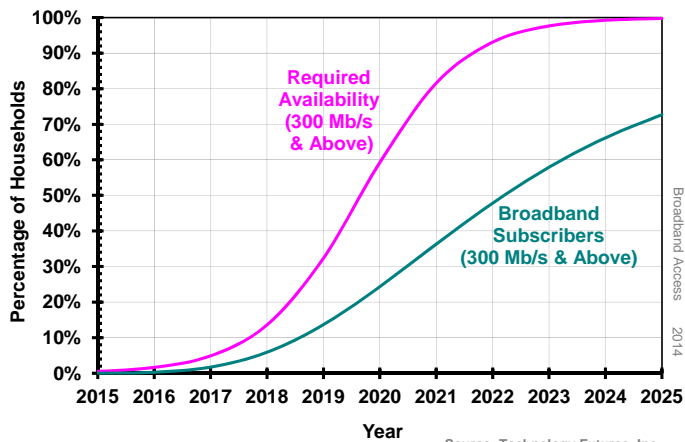


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Availability vs Subscribers, 300 Mb/s & Above - Updated

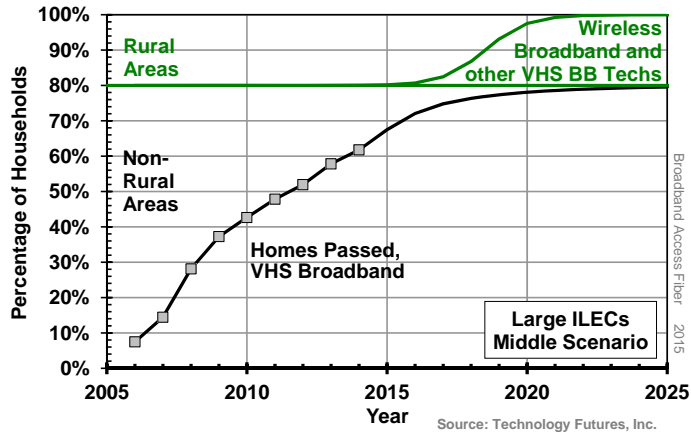


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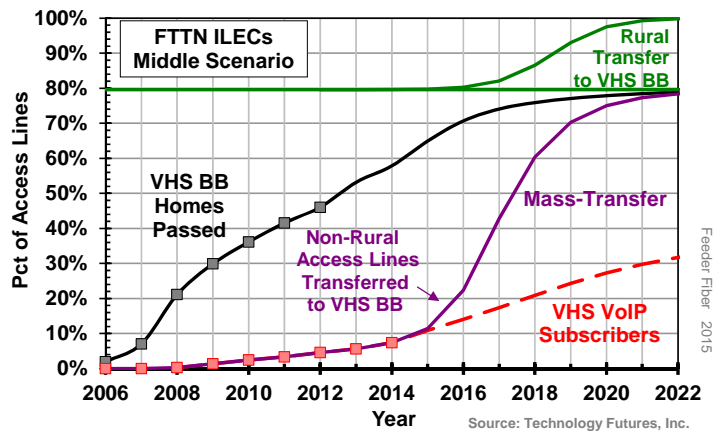
VHS Broadband (10 Mb/s & Above) Deployment



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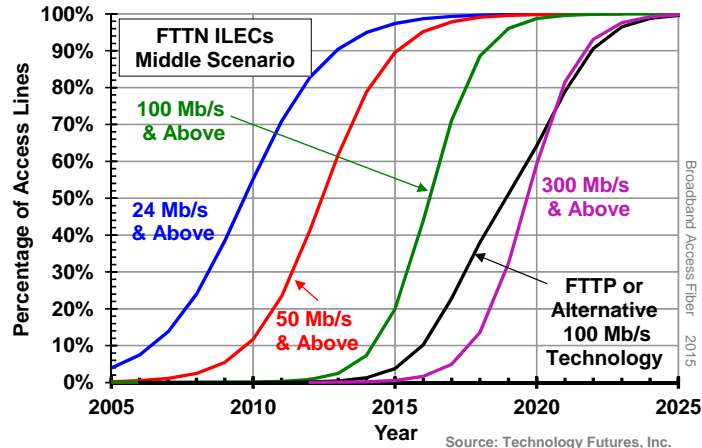
Transfer of Narrowband Access Lines to VHS Broadband – FTTN ILECs



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Non-Metallic Distribution Architectures – Middle Scenario



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TFI Industry Recommended Average Remaining Lives as of 1/1/2015

	Technology Substitution Only	After Access Line Losses
Digital Switching (Legacy)*	2.7 - 4.2	2.1 - 2.9
Circuit Equipment (Legacy)*	2.4 - 3.7	2.0 - 2.7
Metallic Cable - Feeder	2.8 - 4.6	2.2 - 3.0
Metallic Cable - Distribution	3.0 - 6.5	2.7 - 5.3
Fiber Cable**		

* Applies to legacy equipment only. For VHS broadband equipment, TFI recommends an ARL based on a 4-10 year P-Life, depending on the equipment type.

** For fiber, TFI recommends an ARL based on a 20-25 year P-Life.

From 2015 TLEN, 7th Edition

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TFI Industry Recommended P-Lives as of 1/1/2015

	Technology Substitution Only	After Access Line Losses
Digital Switching (Legacy)*	9 - 14	8 - 11
Circuit Equipment (Legacy)*	8 - 11	7 - 9
Metallic Cable - Feeder	10 - 16	8 - 13
Metallic Cable - Distribution	11 - 18	11 - 16
Fiber Cable	20 - 25	20 - 25

* Applies to legacy equipment only. For VHS broadband equipment, TFI recommends a 4-10 year P-Life, depending on the equipment type.

From 2015 TLEN, 7th Edition

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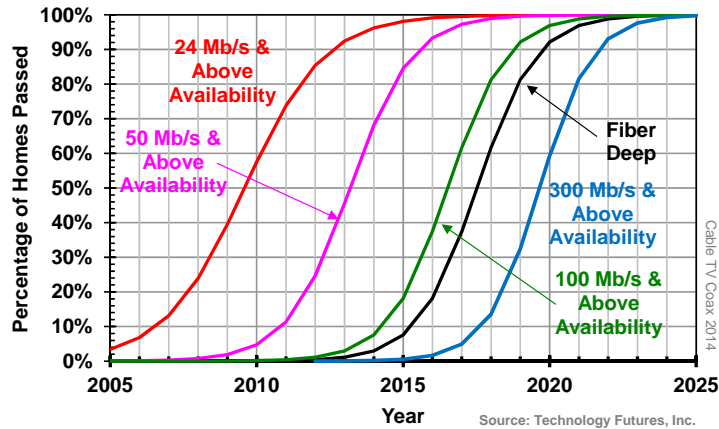
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HFC Networks

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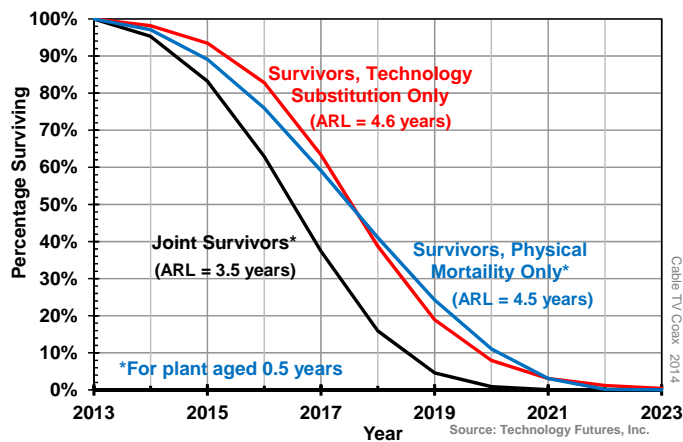
Availability Requirement 100 Mb/s and Forecasted Fiber Deep Adoption



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Coax Electronics, Physical Mortality & Tech Substitution, New Plant (Age = 0.5)

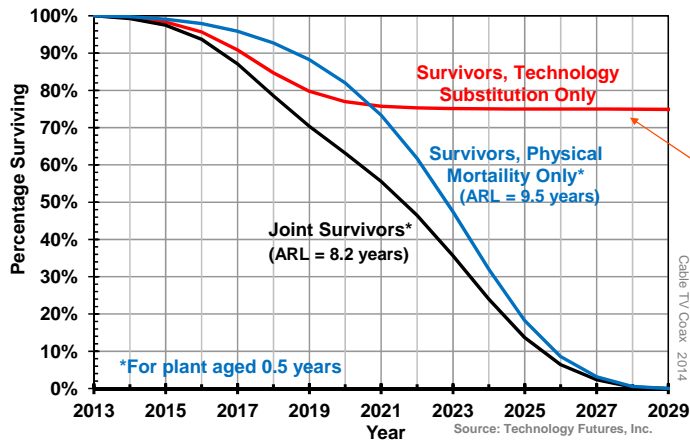


Note: Additional Technology Obsolescence Factor reduces ARL to 3.2 years

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Coaxial Cable, Physical Mortality & Tech Substitution, **New Plant (Age = 0.5)**

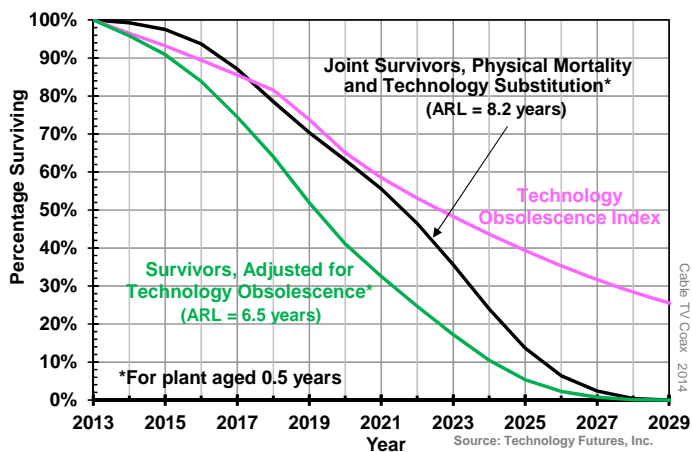


Assumes
Fiber Deep,
Not FTTH

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Coax Cable, Adjusted for Technology Obsolescence, **New Plant (Age = 0.5)**



Assumes
Fiber Deep,
Not FTTH

Note: Additional Technology Obsolescence
Factor reduces ARL to 6.5 years

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