Technology Transitions

July 14, 2014

Changing Communications Landscape

- December 2009 vs. December 2012*
 - > Retail switched access lines: decrease from 127 million to 96 million
 - Compound annual decline of 9%
 - > Interconnected Vol P subscriptions: increase from 26 million to 96 million
 - ❖ Compound annual growth of 17%
 - ➤ Mobile subscriptions: increase from 274 million to 305 million
 - Compound annual growth of 4%
- Nearly 40% of U.S. households are now wireless-only (over 60% for adults age 25-29)**
- 67% of mobile subscribers now have smartphones (up from 16% in 2009)***
- Widespread rollout of 4G LTE networks

Sources: *Nov. 2013 FCC Local Telephone Competition Report

**June 2013 CDC National Health Interview Survey on Wireless Substitution

***comScore MobiLens and Mobile Metrix, March 2014, reporting key trends in the U.S. smartphone industry for January 2014



Multiple Forms of Technology Transitions

application

TDM voice



VoIP (incl. VoLTE)

transport network

TDM circuits & analog



IP packets

physical layer

copper twisted-pair



fiber
wireless
copper twisted-pair
(and combinations)

Potential Benefits of Tech Transitions

- Innovative product offerings and services
- Infrastructure investments
- Increased network efficiencies
- New means of communications
- Disabilities access
- Consumer welfare

The Challenge

- Technology transitions are ongoing and diverse
- These transitions have occurred organically in parallel with availability of legacy services
- As transitions progress:
 - At a certain point, a service changes so much that it may be a new service (a "Ship of Theseus")
 - Providers also will seek to discontinue the legacy services when they reach a 'tipping point'
- Essential to preserve fundamental values in this process (the "Network Compact")

Network Compact

Public Safety and **Universal Access National Security** Statutory **Values** Competition **Consumer Protection**

Jan. 30, 2014 FCC Technology Transitions Order

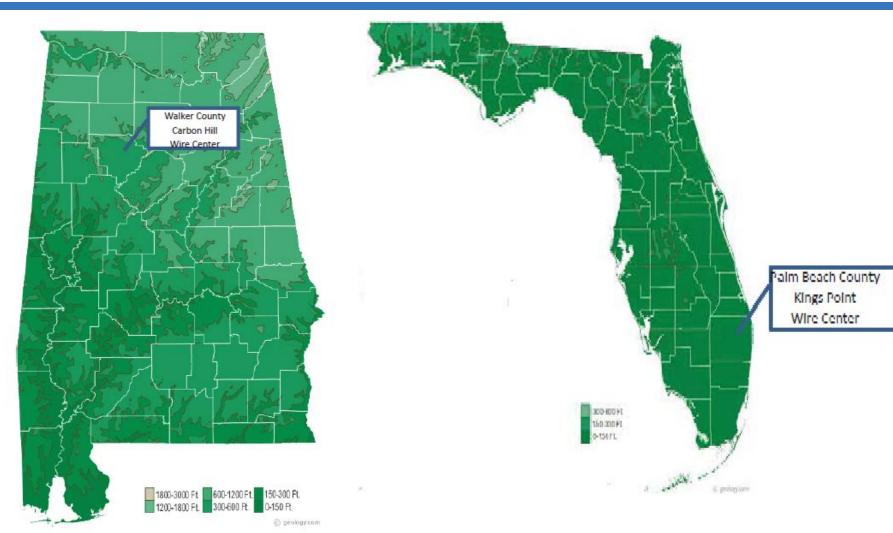
Focused on conducting experiments and gathering data to understand how consumers are affected by historic technology transitions.

Service-based Experiments

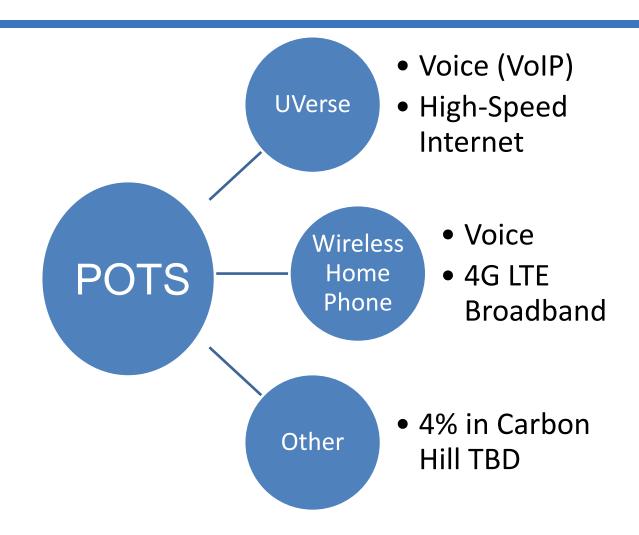
Order invites providers to propose "service-based experiments" on a rolling basis during a 12-month period

- "[E]xperiments in which providers seek to substitute new communications technology for the TDM-based services over copper lines that they currently are providing to customers, with an eye toward discontinuing those legacy services . . ."
- These are "impact" experiments that test effects of transitions on consumers and enduring network values.
 - Not intended to resolve legal or policy debates
 - Not intended to test technology per se

AT&T Proposal: Carbon Hill, AL & Kings Point, FL



AT&T Proposal: Transitions



AT&T Proposal: Phases

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- Started on Feb. 27, 2014
- Initial outreach, planning

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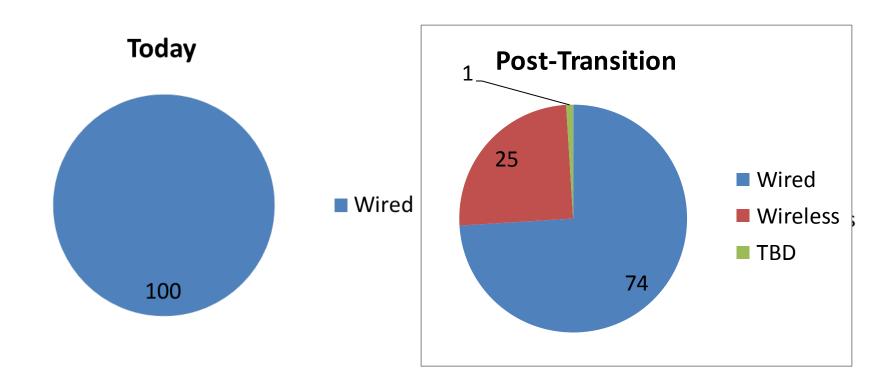
- Grandfathering of existing retail accounts
- Preceded by Section 214(a) applications and public process

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- Sunsetting of existing retail accounts
- Preceded by Section 214(a) applications and public process

AT&T also plans "additional phase" involving wholesale products. This too would require further filings and public processes.

AT&T's Announced Plans: Nationwide



State, Local, and Tribal Assistance

- Help be our eyes and ears to measure consumer reaction to the tech transitions. E.g., help with outreach to inform customers of the changes that are coming; and collect customer reactions as to changes.
- Identify issues with the tech transitions we may not yet have highlighted. What else should we know about?
- Beyond that we're happy to receive anything they want to submit to us.

Other Activities

Rural Experiments

Numbering Testbed Consumer Data Initiative

Public Safety Tech Transitions Workshop

IP-based Relay Services Workshop Rural Broadband Workshop

Targeted
Research for persons w/
disabilities

Questions?