
January 19, 2016

TECHNOLOGY TRANSITIONS UPDATE: EMERGING WIRELINE NETWORKS AND SERVICES

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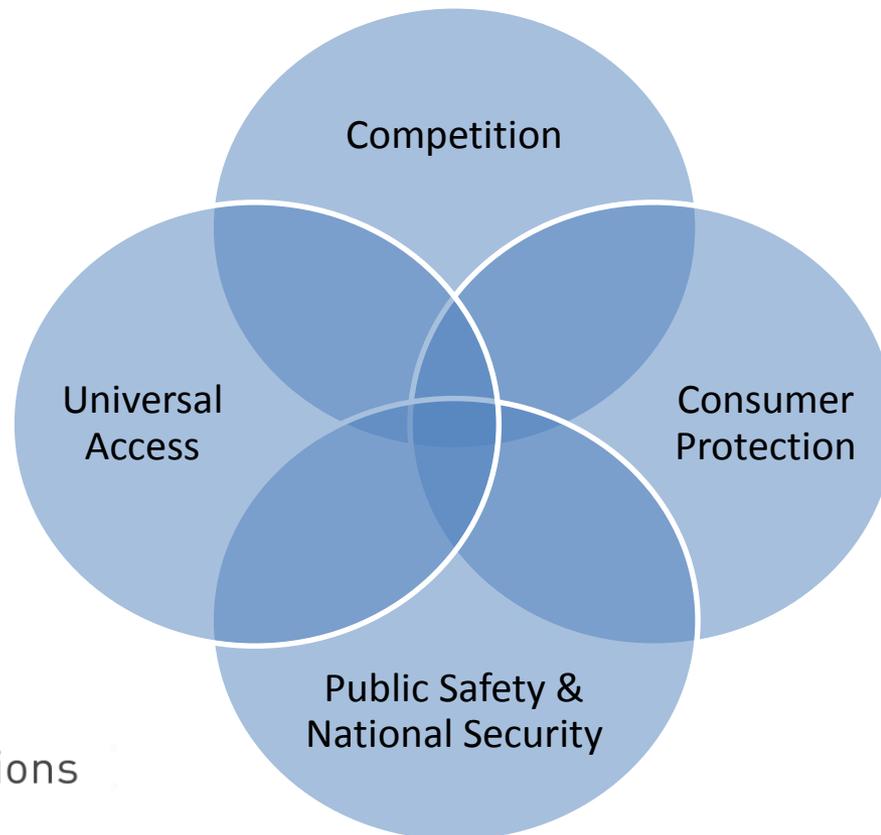
Background

- Technology transitions are transforming our nation's voice communications.
 - From network based on time-division multiplexed circuit-switched voice services running on copper loops to an all-Internet Protocol (IP) network using copper, coaxial cable, wireless, and fiber as physical infrastructure.
- The Commission and its state partners have an important role to play in facilitating this transition and protecting consumers.

Background

- In Jan. 2014 the Commission authorized experiments and other data initiatives to help evaluate the impact of technology transitions on consumers.
 - Experiments continuing in parallel with other actions.
- In Nov. 2014, the Commission offered preliminary proposals and sought comment on how to address key policy issues raised in record.
- Aug. 2015 item addressed key technology transitions issues.
- A separate Aug. 2015 Commission action on backup power.
 - Summarized briefly at the end of presentation.

Guiding Principles



Overview of the *Emerging Wireline Networks and Services* Actions

Goal: Facilitate tech transitions that preserve core values on a technology-neutral basis. Two key ideas:

- Protecting consumers by ensuring that they are informed about their choices.
- Preserving competition where it exists today.

Three Actions: Report & Order (R&O), Order on Recon, and Further Notice of Proposed Rulemaking (FNPRM).

Report and Order: Protecting Consumers

- Post-Sandy debate over replacing the destroyed network in Fire Island, NY provided valuable insight.
- Highlights importance of getting ready for larger-scale transitions.



Photo courtesy of NPS.gov (Stewart)

Retirement of Copper Networks

- FCC has recognized that carriers rationally will seek to retire copper at network “tipping point.”
- Concerns that consumers do not understand how copper retirements will affect them.
 - Potential for confusion-dependent upselling/forced migration.

Copper Retirement – Customer Notice Requirements



- For the first time, customer notice required when copper to the premises retired without consent.
- Notice must provide clear info on impact, timing, availability of services.

Copper Retirement – Additional Updates

Extends notice period for interconnecting carriers to ensure time to upgrade networks, and updates process by which carriers share technical info.

For first time, ensures that copper is not allowed to be *de facto* retired via neglect without public notice.

Requires notice of copper retirements to public safety, state, and Tribal authorities for the first time.

Copper Retirement vs. Section 214 Discontinuance

- Retirement but no discontinuance=notice.
 - Under Communications Act, copper retirement is notice-based process so long as no service loss.
- Discontinuance=approval.
 - Carriers must seek FCC authority to discontinue, reduce, or impair telecom service to a community.
 - Thus a discontinuance that accompanies a retirement requires approval.

Section 214 – Clarification

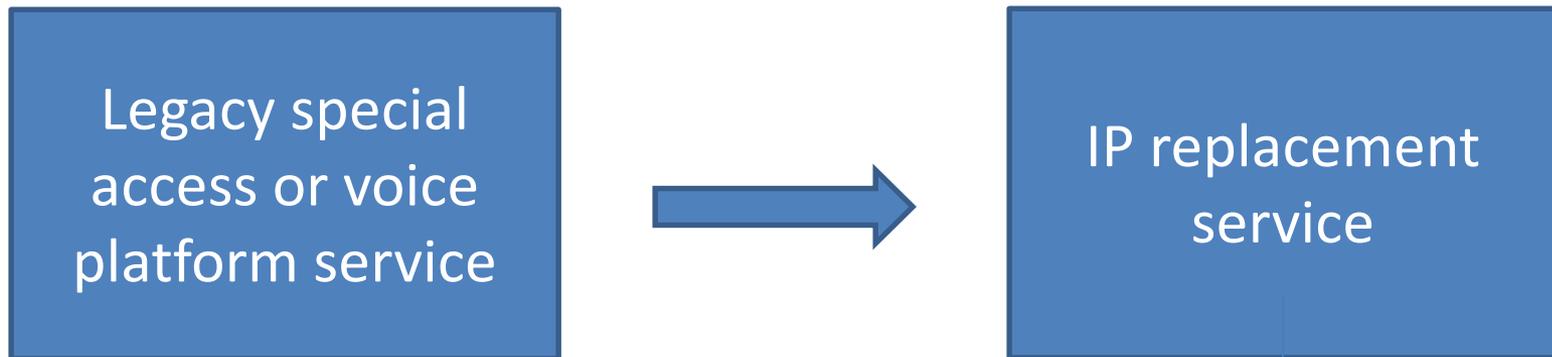
- Clarifies that carriers must determine if discontinuing service to wholesale carrier-customers will result in discontinuance of service to end users.
 - If so, must seek approval so FCC can fulfill its role of safeguarding the public interest.

Preserving Enterprise Competition During the Business Broadband Services/Special Access Proceeding

- Business broadband services(aka special access) = dedicated high-capacity connections used daily by businesses and institutions to transmit voice and data.
- FCC is conducting comprehensive data-driven evaluation of business broadband services market and regulations applicable to it.
- Concerns that competitive LECs would be unable to serve retail customers at competitive rates without reasonable access in the interim.
- Want to maintain competition as wholesale voice “platform” services used as inputs for nationwide services transition to IP.

Reasonably Comparable Wholesale Access

Interim Measure: If transitioning to IP, must maintain reasonably comparable wholesale access until the special access proceeding is complete



- Reasonably comparable rates, terms and conditions
- Condition on authority to discontinue legacy service

Tech Transition Experiments

- AT&T proposed TDM to IP service trials in Carbon Hill, Alabama, and Kings Point, Florida.
- CenturyLink proposed IP business services and IP exchange of business voice traffic in 12 wire centers in Las Vegas, Nevada.

Further Proposals: Ensuring Adequate Substitute for Legacy Services

- Seeks further comment on specific criteria for defining “adequate substitutes” for legacy services that a carrier seeks to take off the market.
- “Everyone concerned would be best served by the Commission’s articulation of criteria now.”

Proposed Criteria: Adequate Substitute

- Network capacity and reliability.
- Service quality.
- Device and service interoperability.
- Service for individuals with disabilities.
- PSAP and 9-1-1 service.
- Cybersecurity.
- Service functionality.
- Coverage.

Other Proposals Under Consideration

Seeks comment / identifies proposals re:

Updating service discontinuance process.

Requiring service discontinuance notices to be provided to Tribal governments.

Communication of technical info between carriers during copper retirement.

Voice platform svcs. wholesale access interim condition.

Another Action Evaluating the Scope of a “Service”

- In Nov. 2014, FCC clarified that tariff language not end of story to evaluating the scope of a “service” under section 214(a).
 - FCC takes a functional approach.
 - Not every functionality is part of the “service.”
- Reaffirmed this decision in Aug. 2015 order.

Ensuring Continuity of 911 Communications



- Adopted rules to help ensure that consumers have the information and tools necessary to maintain landline home telephone svc. during emergencies.
- Providers of modern home voice services will be required to ensure that a technical solution for eight hours of standby backup power is available for consumers to purchase at the point of sale.
- Within 3 years, providers will also be required to offer an option for 24 hrs of standby backup power.

Further Opportunity for Input

Interested parties have submitted comments and reply comments.

Ex partes permissible – input welcome.

R&O, Order on Reconsideration, and FNPRM (FCC 15-97): <https://www.fcc.gov/document/fcc-updates-rules-spur-technology-transitions-protect-consumers>

Concluding Thought

“[A]s we reach the tipping point at which the older networks and services are turned off, will the transitions to the next generation networks benefit all Americans or will we allow some to fall through the cracks? I firmly believe that we can facilitate the transitions, even while ensuring that the benefits accrue to everyone.”

- Statement of FCC Chairman Tom Wheeler

Thank you

- Questions?
- Future information:
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