



Testimony of Jodie Griffin
Senior Staff Attorney
Public Knowledge

Before the
U.S. Senate
Committee on Commerce, Science, and Transportation
Subcommittee on Communications, Technology, and the Internet

Hearing on:
Preserving Public Safety and Network Reliability in the IP Transition

Washington, DC

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Chairman Pryor, Ranking Member Wicker, and Members of the Subcommittee, thank you for this opportunity to discuss the IP transition, public safety, and network reliability. My name is Jodie Griffin and I am a Senior Staff Attorney at Public Knowledge, a nonprofit public interest organization that promotes the public's access to information and culture through open, competitive, universally accessible, and affordable communications networks.

Introduction

The transition of our wireline networks to Internet Protocol (IP)-based services is a tremendous opportunity for our nation, but we must make sure the transition results in an actual upgrade in technology without a downgrade in the services upon which Americans depend. We are now in the midst of the transition: carriers are already actively moving their networks from the traditional Time-Division Multiplexing (TDM) protocol to IP-based technology, and from copper infrastructure to wireless service or fiber. The Federal Communications Commission (FCC) has responded to these technological shifts by collecting public comments, initiating a series of trials, and beginning the process of forming a new framework to handle the policy questions raised by these transitions.

In the network transition, the stakes are high, and it is critical for policymakers to ensure that everyone continues to have access to a reliable network for personal, business, and emergency communications. In addition to bringing new opportunities, the phone network transition presents risks, including concerns the new networks will lack important features that consumers have counted on for decades. This means policymakers at all levels of government must ensure the transition is handled responsibly and everyday Americans are better off as a result of the transition.

The phone network in the U.S. has quietly and reliably provided benefits to the American public for over 100 years. These benefits have become so firmly ingrained in the U.S. economy, public safety systems, and personal communications that users take for granted the policies that make them possible. These benefits were not a happy accident—they were the result of

deliberate communications policies that demanded a telecommunications network that served its users first and foremost.

One of the things we've come to love about our phone network is the ability to conduct our business and personal communications as if we can always trust that the network will just work—because it will. We can choose the type of phone we use. When the power goes out during a natural disaster, our phones—and the central offices that service them—will keep working. In times of emergency, we can always call for aid from police, firefighters, and medical teams. When someone calls a friend that call will always go through—regardless of which carriers the two users subscribe to or where they each live. When the bill comes for that call, the user can rest assured that there will be no fraudulent charges and the carrier will not have “traded” her to another carrier without her permission. If a user changes phone companies, she can keep her phone number. We know that we can benefit from the innovations and features built on the phone network because it is an open platform: innovations like the Internet, new handsets, calling cards, and collect calls all arose because of the network's openness. And in the rare instance that any part of this system breaks down, we know that there are government authorities at the local, state, and federal levels equipped to fix the problem and protect users' interests.

Every single one of these benefits is the result of deliberate policy choices that served specific basic values. Our phone network became the unparalleled success we know today because our policymakers valued five fundamental principles: 1) service to all Americans; 2) competition and interconnection; 3) consumer protection; 4) network reliability; and 5) public safety.¹ These values are no less relevant and, if anything, are even more important as we begin the transition to the next iteration of our nation's communications networks.

As we move forward in the network transition, we cannot step back from the basic commitments that have protected consumers and promoted affordable communications service for decades. We must ensure the next generation of our communications networks are a true step forward for everyone and no one is left worse off as a result of the transition.

Basic Voice Service is Still Important

Even as we move to new technologies that bring exciting new opportunities for customers to access the Internet and other IP-based services, it is important to remember that basic voice service is still vital to public safety as well as the day-to-day personal and business communications of millions of people across the nation. This means our national policies should be shaped with a mind toward preserving the protections and benefits people currently rely on while encouraging new opportunities for better or more efficient service.

¹ See Jodie Griffin and Harold Feld, *Five Fundamentals for the Phone Network Transition*, Public Knowledge (July 2013).

It is important to note that 96% of U.S. residents subscribe to some kind of telephone service.² Of those, over 100 million people rely on traditional copper POTS (Plain Old Telephone Service). 5% of the country relies exclusively on POTS—that’s 15 million people who rely *solely* on traditional phone service.³ Which, incidentally, means the remaining 85 million people subscribing to POTS do so despite also having a mobile phone or other voice product. We can safely assume those 85 million people do not simply enjoy writing two checks each month. Rather, traditional phone service must offer those users something that newer technologies currently do not.

Unfortunately, we are already seeing complaints arise across the country that indicate the network compact may start fraying at the edges if policymakers don’t step in to protect consumers. As Public Knowledge, The Utility Reform Network, and several other state consumer advocates and public interest groups have noted, reports have surfaced across the country indicating carriers are forcing customers off of traditional copper-based phone service.⁴ Complaints from customers in California, Maryland, New York, New Jersey, Illinois, and the District of Columbia have stated that they are being involuntarily moved to fiber or IP-based service (or some combination thereof), even if those new technologies fail to serve all of the users’ needs or will be more expensive. What’s more, this may only be the tip of the iceberg. After all, in deregulated states where the utilities commissions have no authority over quality of service or pricing for basic service, state-level authorities may not be able to even collect data from customer complaints.

We have also already seen complaints from rural residents experiencing degraded service due to rural call completion problems. As I will discuss below, the IP transition can create unexpected problems in rural customers’ service even without any parties necessarily acting in bad faith. This is exactly why the FCC must continue to have authority to handle unanticipated problems and ensure customers continue to have reliable service.⁵ Finally, the FCC’s Wireline Competition Bureau recently found that the average rate for basic voice service in urban areas is \$20.46, indicating that even basic service is not as inexpensive as some may have assumed.

² *Universal Service Monitoring Report*, Wireline Competition Bureau, FCC, at 41, Table 3.1 (Oct. 2013), *available at* http://transition.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Monitor/2013_Monitoring_Report.pdf.

³ Anna-Maria Kovacs, *Telecommunications Competition: The Infrastructure-Investment Race*, Internet Innovation Alliance (Oct. 2013), http://internetinnovation.org/images/misc_content/study-telecommunications-competition-09072013.pdf.

⁴ Letter from Jodie Griffin, Senior Staff Attorney, Public Knowledge, *et al.* to Julie A. Veach, Chief, Wireline Competition Bureau, FCC (May 12, 2014), *available at* http://www.publicknowledge.org/assets/uploads/blog/14.05.12_Copper_Letter.pdf.

⁵ To that end, the Public Safety and Economic Security Communications Act is an important step forward in protecting rural customers relying on a dependable phone network. *See* Public Safety and Economic Security Communications Act of 2014, S. 2125, 113th Cong. (2014), *available at* <https://www.govtrack.us/congress/bills/113/s2125/text>.

Added together, these issues raise the serious question of whether all customers are indeed moving to new services out of a genuine desire to change, or if at least some have been moved off the copper network due to service degradation, increased fees, or through no choice of their own at all. If a carrier is letting its copper network degrade or is telling customers they must move to fiber or wireless service in violation of its common carrier obligations, can we really call that a fair market choice on the part of the customer? And even in the cases where the customer has a meaningful choice to move to services using newer technologies, it is hard to accept the notion that customer actually *wants* the new service to have less reliability, more expensive power backup options, or less accurate 911 location data. When it comes to network reliability and public safety, these are not compromises we should be asking customers to make.

The Network's Fundamental Values

This past January, the FCC, unanimously and with bipartisan support, recognized the fundamental network compact that has successfully guided communications policy for decades.⁶ That compact preserves certain enduring values that ensure our communications networks will remain the envy of the world as we move into IP-based services and new physical infrastructure.

The policies that guide the network transition should serve certain proven fundamental values and continue to protect consumers and encourage innovation. These fundamental values—public safety and national security, universal access, competition, and consumer protection—capture the basic principles that made our phone network a resounding success and can do the same for the next generation of communications technology.

Public Safety and National Security

It is unquestioned that when someone calls 911, that person needs to know beyond a shadow of a doubt that she will be connected in one second. Everyday Americans rely on 911 daily to call for help in time of need. The FCC has already begun to look to the future of public safety requirements with the Next Generation 911 transition.⁷ This conversation, however, is also best situated in the broader context of the overall PSTN transition, both to evaluate the effect of 911 proposals on other aspects of the network, and to anticipate the impact of non-911 proposals on our emergency communications systems.

⁶ See *Technology Transitions*, GN Docket No. 13-5, *AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, GN Docket No. 12-353, *Connect America Fund*, WC Docket No. 10-90, *Structure and Practices of the Video Relay Service Program*, CG Docket No. 10-51, *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, *Numbering Policies for Modern Communications*, WC Docket No. 13-97, Order, Report and Order and Further Notice of Proposed Rulemaking, Report and Order, Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative at ¶¶ 37-69 (rel. Jan. 31, 2014).

⁷ The FCC is also working with surer authority in this area compared to other aspects of the PSTN transition, based on the Next Generation 911 Act. See Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96 (2012), Title VI, Subtitle E.

The network transition can bring with it new opportunities to expand emergency services. For example, the recent deployment of text-to-911 capabilities in certain areas can help people seek emergency aid when placing a voice call is not feasible.⁸ However, we cannot simply assume that new technologies will continue to support the 911 features people rely on after the transition. In particular, as customers increasingly place 911 calls on wireless devices, policymakers should ensure carriers provide emergency responders with detailed and accurate location data. The California Chapter of the National Emergency Number Association has reported a recent significant decrease in the percentage of wireless 911 calls delivering more detailed Phase II location data to public safety answering points (PSAPs).⁹ If PSAPs do not receive adequate location data from carriers, they cannot find callers asking for help unless the caller can describe her own location, which may be difficult in certain emergency situations and places an extra burden on anyone who has a communication disability or additional language barrier. Elsewhere, AT&T's Wireless Home Phone product—marketed as a replacement for traditional landline phone service—tells customers in the fine print they will be required to give 911 operators their address, rather than have their location information transmitted to PSAPs automatically.¹⁰ But it doesn't have to be this way. The technology transitions offer opportunities to integrate multiple location technologies to give more specific location information and to find more efficient ways to notify emergency services when help is needed.¹¹

Public safety rules must ensure emergency services like 911 and geolocation technologies continue to help first responders offer emergency care, regardless of whether the network the customer uses is wireless or wireline, copper or fiber. The conversion to an all-IP network offers an opportunity to further facilitate emergency communications, and that opportunity must not be squandered. This also includes ensuring that the thousands of alarm systems and alarm system standards that rely on access to a “telephone line” are not disrupted by the transition, as we have seen them be disrupted by the attempted transition to Voice Link in Fire Island, New York.¹²

When the traditional architecture of the PSTN no longer exists, it is crucial that consumers are able to contact emergency services when they need it most. The moments in which the public relies upon emergency services like 911 are literally life-or-death, and it is crucial that policymakers implement rules that maintain the public safety components of the phone network. To its credit, the FCC has already begun the process of creating a framework for next-generation 911 services, but these issues must also be considered in the broader context of the overall shift of the PSTN to new technologies.

⁸ See *What You Need to Know About Text-to-911*, FCC (May 23, 2014), <https://www.fcc.gov/text-to-911>.

⁹ Letter from Danita L. Crombach, CALNENA, to Mignon Clyburn, Chairwoman, FCC (Aug. 12, 2013), <http://www.calnena.org/communications/To-FCC-08-12-2013/CALNENA-Letter-to-FCC-081213.pdf>.

¹⁰ AT&T Wireless Home Phone & Internet, <http://www.att.com/shop/wireless/devices/att/wireless-home-phone-and-internet-black.html> (last visited June 2, 2014).

¹¹ See Henning Schulzrinne, *Public Safety Communications in a Time of Transition*, FCC (Apr. 17, 2014), <http://transition.fcc.gov/bureaus/pshs/docs/2014-PublicSafetyWorkshop.pdf>.

¹² See Jodie Griffin, *The Phone Network Transition: Lessons from Fire Island*, Public Knowledge (Mar. 7, 2014), <http://www.publicknowledge.org/news-blog/blogs/the-phone-network-transition-lessons-from-fire-island>.

Network Reliability

The basic mechanisms of the network must continue to function throughout and after the PSTN transition, even and especially in emergency situations. Above all else, Americans rely on their communications networks to work consistently and reliably. Above all else, a successful transition means that phone numbers still work and calls still go through with the same reliability they do today.

One important part of making sure the phone network just continues to *work* on a day-to-day basis is ensuring the network's numbering system continues to function throughout and after the transition. Contrary to the beliefs of some, what defines the "public switched network" is not its underlying technology, but rather its use of phone numbers under the North American Numbering Plan.¹³ Fortunately, the FCC has recognized the importance of ensuring the continuing functionality and security of our numbering system, and has included a phone numbering testbed among its initiatives to more fully understand the transition. The FCC should use the lessons it learns in this testbed to determine the requirements for future Local Number Portability Administrators (LNPAs) and to ensure smooth transitions between administrators when they occur. The FCC could also use this opportunity to consider authorizing multiple LNPAs under § 251(e), given the increasing ease of coordinating data between multiple databases.¹⁴

The FCC currently exercises its authority over phone numbers to distribute phone numbers through the North American Numbering Plan (NANP). This raises the stark and critical question: who will be able to obtain numbers when all carriers have transitioned to IP-based technology? How will phone numbers work in a world with no TDM-based PSTN? These are questions that we absolutely must answer if the phone network as users now know it is to continue operating post-transition.

After the transition, there will also be no "copper safety net" to offer the reliability that users have come to expect with basic phone service. Nevertheless, users' phone service—regardless of the protocols or materials it uses—must be able to withstand emergency situations. Even now we are still witnessing phone network technology "upgrades" result in less redundancy and backup power in the system and increased reliance on the commercial power grid, creating a single point of failure when disaster strikes and users need to communicate most.

The FCC's Wireline Competition Bureau has acknowledged that policymakers must be mindful of the network transition's impact on reliability and performance during power outages, even when the network is transitioning to a technology like fiber that it commonly considered to

¹³ 47 C.F.R. § 20.3.

¹⁴ 47 U.S.C. § 251(e).

be an improvement over copper networks.¹⁵ Fiber offers the potential for faster data speeds and more network capacity, but, unlike the traditional copper network, is not self-powered and needs battery backup during power outages. Similarly, fixed wireless services require batteries, and the battery backup for AT&T's Wireless Home Phone product, for example, only offers 1.5 hours of talk time and 18 hours of standby time.¹⁶ As many communities that have experience hurricanes, tornadoes, and other natural disasters can attest, commercial power can be down for much longer than 18 hours, but users' need to have access to reliable communications remain unchanged.

This is not to say that we must reject any technology that is not self-powered, but we must ensure the network continues to be as reliable as possible during power outages while minimizing the burden on consumers to make it so. And where a new technology differs from the network customers have come to rely on, we must make those differences clear to customers so they are not caught unawares after the power has already gone out. We can recognize consumers' justified expectations based on the traditional network they've known for decades and pursue policies to meet those needs without demanding that technological change be stopped in its tracks.

As the PSTN continues its transition, the FCC and other policymakers must determine how they can ensure the post-transition PSTN continues to guarantee robust service for everyday uses and for emergency circumstances, when users need communications services most.

Universal Access

Issues of public safety and network reliability also raise the question: what *is* the basic service we're aiming to give everyone access to? This transition is an opportunity to look forward: what new opportunities are made possible by new technology, and how does that impact what we determine to be the "basic service" that all should have access to? The Communications Act specifies that universal service encompasses "an evolving level of telecommunications services" and that the FCC should take into account "advances in telecommunications and information technologies and services" as it decides what universal service will look like for homes, schools, libraries, and health care providers across the country.¹⁷ Access to basic communications services reaps tremendous social and economic benefits to users, regardless of the material or technology used to transport the communications.

We cannot simply sit back and assume that new technologies will continue to reach everyone at affordable prices on their own. Even now, we see indications that the transition could result in customers losing access to wireline service—or indeed, any service at all—and

¹⁵ See Julie Veach, Chief, Wireline Competition Bureau, *Protecting Consumers in the Transition from Copper Networks*, FCC Blog (May 7, 2014), <http://www.fcc.gov/blog/protecting-consumers-transition-copper-networks>.

¹⁶ AT&T Wireless Home Phone & Internet, <http://www.att.com/shop/wireless/devices/att/wireless-home-phone-and-internet-black.html> (last visited June 2, 2014).

¹⁷ 47 U.S.C. § 254(c).

having to pay more for services that might not even offer all of the features and reliability of the existing network. For example, AT&T is currently seeking FCC approval of a wire center trial proposal that offers no plan for serving 4% of the population at all in one of the trial areas.¹⁸ AT&T's trial proposal also puts forward a plan to offer only a wireless product to a substantial percentage of the population, even though that wireless service currently cannot support features like medical alerts, alarm monitoring, credit card processing, 800 number service, dial-around calls, collect calls, elevator phone service, and E-911.¹⁹ Technological transitions in the network should be a step forward for everyone—we cannot allow everyday networks users to fall through the cracks in a process that is supposed to *help* people obtain better affordable access to communications platforms.

Policymakers should also consider the impact of the phone network transition on the availability and affordability of Internet access. For example, the Wireless Home Phone and Internet product that AT&T currently offers costs \$80.00 for unlimited calling and just 10 GB of data (the package is \$140.00 for voice and 30 GB of data).²⁰ Under these plans, customers do not have the option of purchasing standalone broadband, so the least expensive package that includes broadband would be \$80.00 for a mere 10 GB of usage. As a comparison, AT&T offers wireline Internet access over its DSL infrastructure for \$14.95 for 150 GB of data.

One of the most important goals of communications policy in the United States is reaching universal service for all Americans across the country. The transition of the PSTN is an opportunity to expand and improve the communications service that all Americans receive, and our communications authorities must determine how they can continue to serve that goal as the traditional make-up of the PSTN changes.

Competition

Interconnection and other competition policies lie at the heart of the development of a robust and competitive communications network. As we saw more than 100 years ago, without mandatory interconnection the phone network will slide inevitably toward monopoly as the largest carriers can gain anticompetitive advantages by withholding access to their customers from competitors. As carriers now move toward all-IP networks, policymakers must determine how they will ensure interconnection and competition among providers post-transition. These policies are critical to creating and maintaining a functioning interconnected network and a competitive market for communications services.

¹⁸ AT&T Proposal for Wire Center Trials, *Technology Transitions*, GN Docket No. 13-5, *AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, GN Docket No. 12-353, at 14 (Feb. 27, 2014).

¹⁹ AT&T Proposal for Wire Center Trials, Wire Center Trial Operating Plan, *Technology Transitions*, GN Docket No. 13-5, *AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, GN Docket No. 12-353, at 14-15 (Feb. 27, 2014).

²⁰ AT&T Wireless Home Phone & Internet, <http://www.att.com/shop/wireless/devices/att/wireless-home-phone-and-internet-black.html> (last visited June 2, 2014).

For example, subscribers to different networks must not find themselves with dropped calls or degraded quality of service due to “peering disputes” between carriers. If NBC and AT&T have a retransmission dispute and AT&T video subscribers temporarily lose NBC programs, it is annoying. But if Comcast and AT&T have a “peering dispute” and millions of AT&T wireless customers cannot reliably call Comcast landlines, it is a disaster. It is not enough to speculate that incentives will prevent such a thing from occurring. Policymakers must make sure such an event continues to be *impossible* after the transition.

The phone network transition also calls into question the future of other rules and policies designed to encourage competition among communications providers. For example, local number portability (LNP) obligations have currently been extended to VoIP providers so that VoIP customers may keep their North American Numbering Plan (NANP) telephone number when changing providers. LNP rules encourage competition by allowing consumers to respond to providers’ price and service changes without losing their phone numbers. But at this juncture the questions inevitably arises: when the traditional PSTN is gone, what will happen to the NANP? How can LNP rules extend to all phone service providers without revisiting the foundation of the NANP or classifying VoIP service?

As the PSTN transitions to new physical facilities and IP protocols, it is critical to the competitive future of the market that the law and rules ensure carriers will continue to interconnect and rules will continue to promote competition in the marketplace to the benefit of consumers.

Consumer Protection

When we talk about a system that everyday Americans count on to call 911, businesses, and loved ones, we cannot ignore users’ need for consumer protections in the network. Competition is important, but it does not always guarantee consumer protection. From the privacy of phone calls to truth-in-billing to slamming and cramming, Americans rely on a safety net of rules that protect them when they communicate with one another. Throughout and after the PSTN transition, consumers must continue to be adequately protected—including effective recourse through the timely resolution of complaints.

But on the federal level, the Federal Communications Commission has only extended privacy rules to interconnected VoIP services by reasoning that those VoIP services send calls to and receive calls from the traditional phone network.²¹ Customers should be able to rely on the same protections they have always enjoyed when they switch to what by all appearances seems like a pure replacement for “regular telephone” service. After the DC Circuit’s recent decision in *Verizon v. FCC*, we can be more confident that the FCC could use its section 706 authority to continue consumer protections in the IP world, but Congress should continue to monitor

²¹ 47 U.S.C. § 222.

movements in this space and ensure important consumer protection rules are actually carried over onto IP-based networks.

As the PSTN begins to transition to IP protocols and other upgraded technologies, policymakers must come to terms with how they will continue to protect consumers post-transition. All signs indicate that consumer protection rules will be equally, if not more, important post-transition than they are today, and if anything consumer protection agencies will need flexibility to ensure that current and future consumer protection rules serve the same basic social needs as they do today.

The IP Transition and Rural Communities

The new pattern of carriers eager to replace existing networks with new, untested technologies after natural disasters or when wireline networks have simply been allowed to degrade will have especially strong consequences for rural communities. Rural areas depend on wireline services more than most, especially because wireless deployment—even beyond its general limitations compared to wireline service—is not very strong in rural areas. And when a rural community loses a wireline service provider that offered DSL or other broadband service, there is rarely any competing service to turn to for continued internet access. At the very least, the rural farmers who grow our food should know that they will be able to make phone calls and access the internet when needed to check weather patterns, predict crop growth, and make business arrangements to harvest and transport crops. This also impacts more than just rural communities themselves—when farmers are arranging food shipments to your town, do you want them to lose service?

The recent rural call completion problem also reminds us that rural communities may bear the brunt of unexpected complications tied to the IP transition, with potentially devastating consequences. As carriers switch to IP technology, it becomes possible for them to route calls through Least Cost Router systems, creating latency and sometimes trapping calls in perpetual loops so calls to or from rural areas do not go through. The Commission has rightly recognized that this issue speaks to our foundational expectation that the phone network will be reliable for all Americans, including those in rural areas, and has opened a proceeding to learn more about exactly why the rural call completion problem is getting worse.²² But even so, the FCC has received some shockingly inadequate carrier responses to rural call completion complaints. For example, one carrier told the FCC: “We have contacted the [rural complainant] and have successfully resolved this matter by advising [her] that due to living in a rural area she will experience service issues.”²³ As discussed below, the DC Circuit’s recent decision overturning

²² *Rural Call Completion*, Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 13-39 (rel. Nov. 8, 2013).

²³ FCC Enforcement Advisory, *Rural Call Completion: Long Distance Providers Must Take Consumer Complaints About Rural Call Completion Problems Seriously* (July 19, 2013), http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0719/DA-13-1605A1.pdf.

parts of the FCC's net neutrality rules call into question how the FCC could effectively solve this problem absent classification under Title II.

This is why we need rules of the road: problems will inevitably arise as old systems fade away and new ones arise, but carriers have clearly shown that we cannot simply assume that companies will voluntarily defend the fundamental principles that have made our communications networks great. Meanwhile, 25 states have eliminated or reduced state commission authority over telecommunications services, and 12 states (all of which are in AT&T's incumbent local exchange carrier territory) have eliminated or reduced carrier of last resort obligations.²⁴ Particularly where the states have effectively written themselves out of the conversation through deregulation, everyday Americans are relying on federal authorities as their sole defender to protect the reliable, affordable communications access they count on.

The IP Transition and the Elderly

Perhaps the community that stands to be the most impacted by the IP transition is the elderly community. Older Americans have traditionally been later adopters of broadband and wireless technologies. Older Americans also opt for wireline voice services to a greater extent than other demographics, with 89.5% of households aged 65 and above living in homes with wireline voice service according to a National Health Interview Survey. In households in the 45 to 64 range, 74.2% choose to maintain wireline voice service. Studies show that while more wireless options have increased, this community to prefers to have *both* options available.

Maintaining a network that can support Life Alert technologies for health related emergencies, public safety alerts, and reliable access to 911 capability is critically important for this fast growing demographic. Additionally, although the phone provided by a cable company may generally look and function like a telephone, an older person might not realize the technology used to deliver their voice service is different and not held to the same regulatory protections that they may be dependent on.

While carriers may cite regulation as a reason for the lack of broadband deployment to rural and high cost areas, it has more to do with the low population density that fails to deliver a sufficient return on investment. The lack of investment in broadband and wireless infrastructure in low population density areas raises serious concerns for the future quality of services available to the elderly community over an IP-based network. The relief from "regulatory burdens" described by AT&T its FCC proposal could have serious consequences for communities that depend on the reliability ensured by wireline regulation like 911 functionality, equal access requirements, and COLR obligations.

²⁴ Sherry Lichtenberg, Ph.D., Telecommunications Deregulation: Updating the Scorecard for 2013 National Regulatory Research Institute, at 1, 20-22 (May 2013).

Finally, many older Americans also lived on a fixed income, and could be subjected to paying for expensive bundles on upgraded networks in part due to the lack of maintenance or availability of traditional copper based networks. These bundles may not qualify for crucial Lifeline subsidies that provide older and low-income Americans with critical access to phone service.

Moving Forward in the IP Transition

We are now in the midst of the network transition, and the FCC has taken action to gather information and begin creating a framework in which to address the policy questions raised by these technological changes. As policymakers continue working on this issue, the near-term focus should be on collecting data about new technologies, clarifying what standards carriers must meet to replace existing networks with new technologies, and protecting network users throughout and after the transition.

Clarifying the § 214(a) Standard

Before a carrier can discontinue, reduce, or impair service to a community, it must receive authorization from the FCC certifying that the change will not adversely affect the present or future public interest.²⁵ This system was not designed with the IP transition in mind, and it is simply not suited to situations where a carrier wishes to replace its existing service, still high in demand, with another service. The FCC must therefore take steps now make clear what specific changes would “impair” service under § 214(a) in the context of the network transition, ensuring that its analysis continues to serve the values identified in the unanimous Commission Order beginning the trials process.

There are three areas in particular that need guidance. First, what policies should the Commission adopt as applicable to any new service? These questions would be best handled in the FCC’s existing open proceedings addressing these issues.²⁶ Second, what technical standards for covered services must the new service meet? For example, what consistent voice quality standards should new services meet (as measured in quantifiable—not merely qualitative—measurements)? This should be a pure question of engineering, supported by technical trials and other relevant engineering data, industry standards and best practices, and other technical sources.

Finally, what services must be covered? This is a mixed question of policy and engineering. For example, the FCC has long required providers to permit any network

²⁵ 47 U.S.C. § 214(a).

²⁶ See Letter from Angie Kronenberg and Karen Reidy, COMPTTEL, to Marlene H. Dortch, Secretary, FCC (Apr. 2, 2014), *available at* <http://apps.fcc.gov/ecfs/comment/view?id=6017610666>.

attachment that does not harm the network.²⁷ Whether the loss of this capability would constitute an impairment or reduction in service is a question of policy. But if the FCC determines that the new service must permit network attachments, then the question of how to do so becomes an engineering question.

More specifically, the FCC should also give guidance for when natural disasters damage networks and carriers wish to replace the network with new technologies instead of rebuilding the copper network. Communities and their residents have always had to deal with temporary network outages after natural disasters, but now that we are in the midst of the phone network transition, we are seeing instances where carriers want to respond to damaged networks by replacing the existing networks with new, untested services, rather than repairing or rebuilding the infrastructure the community has relied on for decades. Like the rest of the phone network transition, this can be an opportunity for better, newer service for the community, but unfortunately we have already seen how it can also force customers—who are already trying to rebuild their lives after a devastating natural disaster—to accept less reliable, more restricted services than what they had before.

Collecting Data to Inform Policy Decisions

The FCC is currently in the process of arranging and approving a series of technical experiments designed to better understand the impacts of new network technologies on consumers. Policymakers should use these trials to better understand the transition’s technical challenges and opportunities and inform policy decisions going forward.

The trials are an opportunity to collect technical data about new network technologies under a variety of parameters.²⁸ This data can be used to inform policies that ensure we continue to protect the fundamental values of the network. Ideally, the FCC will be able to use the information collected in the trials to create a detailed “checklist” of technical standards that would guide companies seeking permission under § 214(a) to replace their existing networks with new technologies.

It is also worth confirming that the trials, while a useful tool for policymakers, cannot become a vehicle for the transition itself. A trial is not a product launch. The trials must be limited, transparent, carefully controlled experiments, with definite start and end points and definite metrics by which to collect data. Any attempt by a carrier to co-opt a trial into a permanent deployment plan should be firmly rejected to protect customers and avoid distracting from the trials process.

Continuing to Protect Consumers

²⁷ See 47 C.F.R. § 68 *et seq.*

²⁸ See *A Brief Assessment of Engineering Issues Related to Trial Testing for IP Transition*, CTC Technology & Energy (Jan. 13, 2014), <http://www.publicknowledge.org/files/CTC-PK%20PSTN%20Report.pdf>.

We cannot let customers be left behind while we are in the midst of these policy debates. We have already seen customers across the country report that they have experienced dropped calls and degraded service quality, and that their carriers responded to their requests for help by aggressively upselling them instead of maintaining the network (as they are legally required to do).²⁹

This state of affairs, as reported by consumers across the nation, is unacceptable. Congress and the FCC should both look into the industry practices that led to these complaints, and where appropriate the FCC could also begin enforcement proceedings or information requests. Failure to take any action will only undermine the public's confidence in the network that we have relied on for decades and puts network users across the country at risk of losing access to basic communications service.

Authority to Preserve the Network Compact

As we move forward with the network transition, it is imperative that the FCC continues to have authority to implement policies that serve the network's enduring values.

The Court of Appeals for the D.C. Circuit's recent decision overturning the FCC's no-blocking and nondiscrimination Open Internet rules called into question the FCC's ability to continue applying certain fundamental policies to the phone network as it transitions to IP-based technology.³⁰ Essentially, the DC Circuit ruled that when the FCC has put something in the Title I "information service" box, it cannot then treat that service like the phone system. This can become a serious problem when the service at issue *is* the phone system. Thus far, the FCC has classified Internet access service as an information service, but has not classified interconnected VoIP as either an information service or a telecommunications service.

To the extent that parts of the phone network's post-transition infrastructure fall under Title I, the FCC now has expanded authority to implement consumer protection rules like extending slamming and cramming rules to IP-based services. However, the DC Circuit's decision casts doubt on the FCC's ability to require VoIP providers to complete all phone calls, prohibit VoIP providers from blocking calls, and implement "carrier of last resort" obligations for VoIP service.

²⁹ See Letter from Jodie Griffin, Senior Staff Attorney, Public Knowledge, et al. to Julie A. Veach, Chief, Wireline Competition Bureau, FCC (May 12, 2014), *available at* http://www.publicknowledge.org/assets/uploads/blog/14.05.12_Copper_Letter.pdf.

³⁰ *Verizon v. FCC*, Case No. 11-1355 (D.C. Cir. Jan. 14, 2014).

In 2012, the FCC’s declaratory ruling addressing the problem of rural call completion was grounded in Title II common carrier authority and the duty to serve everyone.³¹ But, as the DC Circuit explained in the net neutrality context, this is precisely the type of action the FCC cannot take for non-common carrier services. So, post-transition, absent reclassification, the FCC would be unable to ensure that all calls go through when someone dials a 10-digit phone number. The FCC could—as it can with net neutrality—require companies to disclose if they are blocking calls or otherwise “managing” traffic in a way that degrades rural traffic. But, as too many in rural America can already tell you, this has not been effective at curbing the problem.

Similarly the FCC’s inability to apply common carriage-like rules to IP-based services could mean the FCC will be unable to implement “carrier of last resort” (COLR) rules after the phone network has transitioned to IP.³² After all, the obligation to serve the public indiscriminately is at the core of common carriage, so without authority under Title II the FCC could be unable to ensure that everyone in the country has at least one option for standalone basic communications service. Particularly as states deregulate their own COLR rules, the FCC’s continued role is critical to achieving universal service throughout and after the transition.

To the extent policymakers ever had the luxury of avoiding the question of the FCC’s authority over IP-based services, the phone network transition and the recent net neutrality decision in the DC Circuit make clear that the time for putting off this decision has ended. The underlying technology of the network may be changing, but the fundamental values of the network remain the same, and the FCC must continue to have the authority it needs to protect users and honor the network compact.

Conclusion

The transition of the phone network presents new opportunities and new challenges for policymakers seeking to ensure new networks constitute a true step forward, not a step backward, for everyday Americans. The stakes are high. The choices policymakers make now will impact how the public conducts business, communicates with loved ones, and reaches emergency services. Public Knowledge urges policymakers to follow the basic values that have informed our communications networks since the founding of our country to ensure we can all continue to enjoy a communications network we can count on.

³¹ *Develop an Unified Inter-carrier Compensation Regime*, CC Docket No. 01-92, *Establishing Just and Reasonable Rates for Local Exchange Carriers*, WC Docket No. 07-135, Declaratory Ruling (rel. Feb. 6, 2012), available at https://apps.fcc.gov/edocs_public/attachmatch/DA-12-154A1.pdf.

³² Incidentally, carriers deploying new networks like fiber-based infrastructure may be willing to accept Title II classification when they wish to invoke their common carrier privileges to install fiber over private property or use public rights-of-way. Bruce Kushnick, *It’s All Interconnected: Oversight and Action is Required to Protect Verizon New York Telephone Customers and Expand Broadband Services*, Public Utility Law Project of New York, Inc. (May 13, 2014), <http://newnetworks.com/wp-content/uploads/PublicNN3.pdf>.