

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
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)
Technology Transitions Policy Task Force Seeks) Docket No. 13-5
Comment on Potential Trials)
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To: The Commission

**COMMENTS OF THE TELECOMMUNICATIONS INDUSTRY
ASSOCIATION**

The Telecommunications Industry Association (“TIA”)¹ supports the broad objectives of the Federal Communications Commission’s (“Commission’s”) Technology Transitions Policy Task Force as it tackles in a comprehensive and systematic fashion how both the industry and applicable governing regulations will transition to next-generation services and platforms, consistent with the Commission’s mandate to protect the public interest.²

The Commission should be applauded for the foresight to ensure that the inevitable transition of legacy transmission platforms and technologies to Internet Protocol (“IP”) networks occurs in an organized and orderly fashion. The National Broadband Plan recognized that continued maintenance of legacy networks not only risks stranding that ongoing investment, but

¹ TIA represents the global information and communications technology (“ICT”) industry through standards development, advocacy, tradeshow, business opportunities, market intelligence and world-wide environmental regulatory analysis. Its hundreds of member companies manufacture or supply the products and services used in the provision of broadband and broadband-enabled applications. Since 1924, TIA has enhanced the business environment for broadband, mobile wireless, information technology, networks, cable, satellite and unified communications. TIA’s standards committees create consensus-based voluntary standards for numerous facets of the ICT industry.

² *Technology Transitions Policy Task Force Seeks Comment on Potential Trials, Public Notice*, GN-Docket No. 13-5.

“siphon[s] investments away from new networks and services.”³ The Plan highlighted the costs of “requiring an incumbent to maintain two networks,” and recommended the Commission “ensure that legacy regulations and services did not become a drag on the transition to a more modern and efficient use of resources.”⁴

Facilitating this transition is one of the most significant steps the Commission can take to affirmatively help promote broadband deployment and infrastructure investment while serving the public interest. TIA notes that the Commission has already undertaken significant steps toward advancing network transitions. The Commission’s continuing reform of the Universal Service Fund (“USF”) and Intercarrier Compensation (“ICC”) are important steps toward facilitating the transition to an all-IP network.

Market Data Reveals that the IP Transition is Ongoing. TIA’s annual research confirms that a comprehensive review of the transition to IP networks is timely as consumers and businesses increasingly choose to replace legacy services with IP alternatives.⁵ Specifically, each year TIA’s *Market Review & Forecast* publication analyzes a wide range of data, weighing economic, technology and policy drivers, with specific data on industry segments, including wireless data, wireline data, conferencing services, wired internet access, network equipment and

³ Federal Communications Commission, *Connecting America: The National Broadband Plan*, at 49, 59 (2010).

⁴ *Id.* at 59.

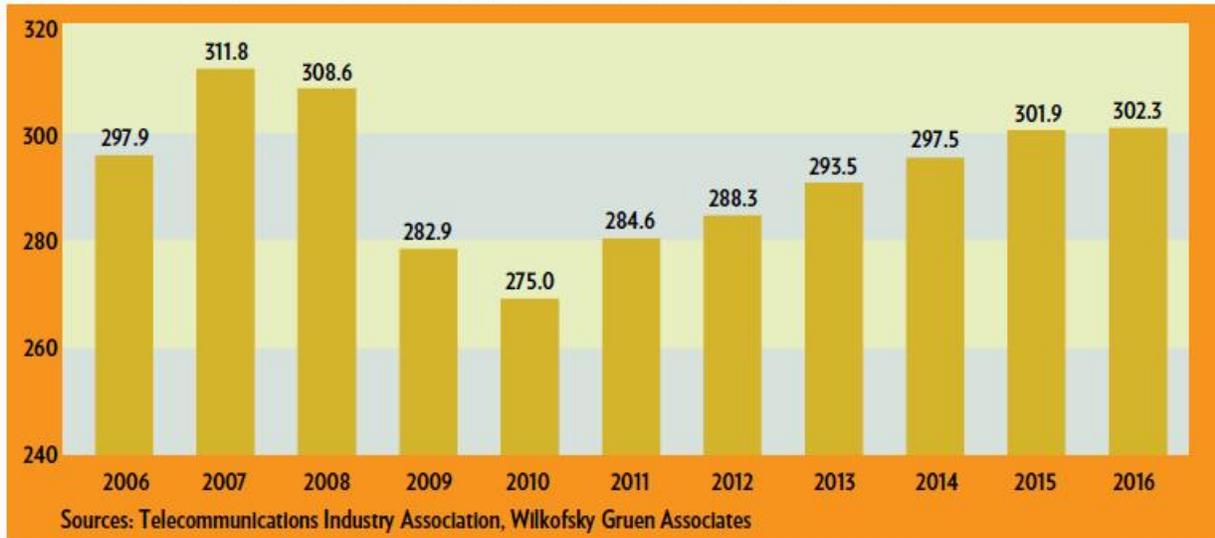
⁵ This data, as well as all other projections and statistics provided in this document which are not cited to otherwise, are derived from the TIA *2013 ICT Market Review & Forecast*, a proprietary annual publication from TIA containing distilled data and analysis on information and communications technology industry trends and market forecasts through the end of 2016. This document is available for purchase at <http://www.tiaonline.org/resources/market-forecast>.

more. This data confirms the speed with which the network transition is taking place and underscores the benefits associated with enabling the network transition.

The 2013 Market Review & Forecast estimates that in the voice services market, circuit-switched spending fell 5.7 percent in 2012, comparable to the 5.8 percent drop in 2011. That decline offset the 10.3 percent rise in VoIP, which grew less than half as fast as the 22.7 percent rise in 2011. In the data services market, fixed broadband increased 5.0 percent, its largest gain since 2008, augmented by the jump in IPTV. In the network infrastructure market, each component posted comparable gains, with access infrastructure growing 5.9 percent, central office infrastructure increasing 5.2 percent and backbone infrastructure rising 5.1 percent.

TIA expects the overall landline market to continue to expand at low single-digit rates during the next four years as moderating declines in voice services are offset by moderating gains in each of the other components. In the voice services market, we expect smaller decreases in circuit-switched spending, as most households and businesses likely to drop their circuit-switched lines have already done so. The impact of cancellation of second lines when households switched from dial-up to broadband and when children switched from landline to wireless has run its course. Meanwhile, we expect VoIP growth to drop to single digit levels as that market begins to mature.

LANDLINE SPENDING IN THE UNITED STATES (\$ BILLIONS)



The number of circuit-switched landlines decreased 6.1 percent in 2012, the smallest decline since 2008. Nevertheless, there were still nearly three times as many circuit switched subscribers as VoIP subscribers. Aside from inertia, the chief attributes sustaining the circuit-switched market are quality and reliability. Circuit-switched lines offer reliable E911 coverage, the quality of the connection is superior on a landline phone to that on a wireless phone, and corded phones operate during power blackouts. Landlines are also needed for many home security systems, home fax machines and pay-per-view television.

VOICE LANDLINES IN THE UNITED STATES (THOUSANDS)

Year	Circuit-Switched	VoIP	Total
2006	172,189	10,400	182,589
2007	163,369	16,075	179,444
2008	154,656	20,050	174,706
2009	133,093	23,470	156,563
2010	122,174	28,896	151,070
2011	112,240	33,635	145,875
2012	105,400	35,800	141,200
2013	101,300	38,000	139,300
2014	97,500	40,250	137,750
2015	94,300	42,550	136,850
2016	91,300	44,850	136,150

CHANGE IN VOICE LANDLINES IN THE UNITED STATES (PERCENT)

Year	Circuit-Switched	VoIP	Total
2007	-5.1	54.6	-1.7
2008	-5.3	24.7	-2.6
2009	-13.9	17.1	-10.4
2010	-8.2	23.1	-3.5
2011	-8.1	16.4	-3.4
2012	-6.1	6.4	-3.2
2013	-3.9	6.1	-1.3
2014	-3.8	5.9	-1.1
2015	-3.3	5.7	-0.7
2016	-3.2	5.4	-0.5
2013-2016 CAGR	-3.5	5.8	-0.9

Sources: Federal Communications Commission, Telecommunications Industry Association, Wilkofsky Gruen Associates

Beyond this market data, TIA notes that obsolescence continues to be a major driver of the transition. Legacy TDM platforms are typically already approaching 40 year plus lifespan. Essential expertise and equipment spares are becoming scarce. Should an original vendor no longer be in business and if no alternative support or spares are available, then carriers' can be forced to migrate from their legacy silo model to a new voice platform.

IP-Transition Timing Should Be Grounded in Investment Economics, not Legacy

Regulation. TIA supports leaving key questions regarding the timing of an IP-transition to the market-based economic considerations of carriers. Investment decisions are appropriately left to individual companies weighing competing considerations and limited resources. Carriers contending with higher maintenance costs associated with legacy equipment already have strong incentives to make appropriate technology transitions as quickly as feasible.

Nevertheless, we note the earlier comments of Alcatel- Lucent stating that “Even though studies suggest drivers do exist for PSTN retirement (excess PSTN capacity, high operating costs, obsolete spares and declining knowledge base, etc) carriers often cite regulatory requirements as a top reason for prohibiting full scale PSTN retirement programs.”⁶

In light of the questions raised by the notice regarding 9-1-1, Alcatel-Lucent’s case study regarding interplay between legacy regulation and investment decision-making bears reinforcing:

“In one real world example, Alcatel-Lucent performed an intensive three month long economic and technical analysis of one carrier’s options for replacing its aging Class 5 infrastructure. Existing regulations required the carrier to host an IP-TDM gateway at all existing central offices with either any active interconnect or 911 PSAP trunk. In today’s IP voice market, the most common approach is to centralize such gateways (e.g. 4-8 locations nationwide). Legacy regulatory requirements that have nothing to do with the efficiency of modern day IP networks essentially undermined the economic analysis, as the capital and operating expenses for large numbers of widely distributed, lower capacity gateways was much, much higher than a more scalable, centralized approach.”⁷

A transformation policy that establishes a go-forward environment and regulatory clarity and certainty is in the best interest of the marketplace and consumers.

The FCC Policy’s toward Transitioned Services Should Focus on Substance over Form. As a standard for determining the appropriateness of continuing legacy regulatory requirements, TIA advocates an approach that focuses on continue of the “substance” of a service over the regulatory “form.” Regulatory “substance” includes requirements actually impacting an end user’s expectation regarding service availability and performance. Regulatory

⁶ Alcatel-Lucent Jan. 28 Comments, GN Docket 12-353 at 16.

⁷ Id.

“form” may involve metrics of a service’s technical attributes associated with a specific technology.

In an example in which regulatory form appears to trump substance, Alcatel cited its experience in which a carrier considering a PSTN migration was constrained by obligations associated with legacy voice features which required unnecessarily identical features to be provided an IP-based replacement:

... the IP-substitute included a nominal number of additional milliseconds of dial tone delay after switch hook closure compared to the legacy solution. While the percentage variation was insignificant with respect to customer quality of service, it was deemed unacceptable due to regulation tied to legacy technology. Ultimately, a lack of 100% equivalent implementation of existing tariffed voice services blocked the carrier’s acceptance of the PSTN consolidation and retirement plan, notwithstanding a compelling business case and equivalent service quality.⁸

Appropriate consideration needs to be given that equipment that has exceeded their anticipated life cycle will inevitably become less reliable with age. Alternative technologies can exceed the performance of these deteriorating legacy investments.⁹

Trials Need to Take into Account Continuity for Vital Services. The Commission appropriately asks for comment reading the potential impact on Public Safety & NG911. TIA concurs that addressing these issues is essential to the success of trials. A transition from TDM to IP must protect the public interest furthered by the use of critical infrastructure of TDM

⁸ Id. at 17.

⁹ Verizon’s “Fire Island” experience after Superstorm Sandy provides a case study in the circumstances in which equipment failure necessitates such a technology transition, and how comparable services can be maintained. See http://www22.verizon.com/about/community/fireislandny.htm?CMP=DMC-CVZ_ZZ_ZZ_Z_ZZ_N_X00447 (last accessed July 8, 2013)

services provided by commercial service providers. Many critical infrastructure systems across the nation rely on TDM for services and applications, and these essential functions must be provided an appropriate transition path so that key safety services can continue to function and are not stranded.

TIA notes that in addition to 9-1-1, commenters to the in this proceeding have cited the potential public interest impact on other services. The comments of the Alarm Industry Communications Committee are illustrative of the coordination necessary with carriers in implementing trials with customers using specialized communication services:¹⁰

“Customers' alarm monitoring services also may not operate when their POTS service is replaced with IP services if the IP services do not appropriately encode and decode the tone messages sent by alarm panels. In recognition of this problem, the National Fire Protection Association (NFPA) created a standard, which was inserted into the National Fire and Signaling Code (NFPA 72), to be followed by Managed Facilities Voice Network systems such as Verizon FIOS, AT&T U-Verse, and digital voice services of cable companies, to give alarm companies and their customers equivalent service. If the providers of IP services do not follow the NFPA standard, alarm signals may not be transmitted to the alarm monitoring central office during a fire or security event, thus placing the customer in jeopardy.”¹¹

Harris Corp has observed that:

“Proposals to remove obligations upon commercial telecommunications carriers to provide TDM services to their customers could put at risk the FAA's ability to effectively control our nation's air traffic. The FAA's Telecommunications Infrastructure (FTI) Program, which provides the telecommunications services the FAA needs for the National Airspace System, uses TDM applications and services extensively to deliver those services. Further, digital services do not extend to many of the FAA's remote locations. While efforts are being made through the FAA's “NextGen” Programs¹² to

¹⁰ Alarm Industry Communications Committee Feb. 25 Comments, GN Docket 12-353.

¹¹ *Id.* at 3.

¹² What is NextGen? available at http://www.faa.gov/nextgen/why_nextgen_matters/what/ (last accessed July 8, 2013).

upgrade the National Airspace System to communications interfaces based upon Internet Protocol (IP) standards, over 92% of FTI services continue to be TDM-based.¹³

The Commission should ensure that its policies do not prolong the nation's reliance on legacy copper-based services or frustrate the ability of providers to choose the most efficient solutions for serving consumers. However, it is essential that appropriate measures are taken by all parties in order to assure the continuity of critical communications dependent functions.

FCC's Transition Process Should Be Guided by Core Policy Objectives. As the Commission considers how best to structure the transition to IP platforms, its review should be guided by clearly articulated goals:

- (1) encouraging investment in intelligent network infrastructure;
- (2) fostering competition in the IP industry;
- (3) allowing the market, rather than the government, to reflect consumer choice; and
- (4) accelerating broadband infrastructure investment.

Promisingly, the Transitions Task Force recognizes the need to take a “hard look at many rules that were written for a different technological and market landscape.”¹⁴ To that end, the Commission should avoid the reflexive application of legacy rules to competitive IP platforms. Outdated regulation can deter investment and distort competition, and may impede, rather than facilitate, the IP transition. Further, this review is fully consistent with the Commission's overall strategy for bringing broadband to all Americans through the removal of roadblocks to

¹³ Harris Corp. Jan. 28 Comments, GN Docket 12-353 at 1-2.

¹⁴ See, e.g., Task Force Release at 1.

deployment, increasing investment certainty, and accelerating infrastructure investment that will expand broadband network reach and robustness across the country.¹⁵

Conclusion. The Commission should conduct a thorough review of our nation's transition to IP platforms, and help all affected parties navigate this transition in a manner that promotes additional infrastructure investment while protecting consumers and competition.

Respectfully submitted,

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¹⁵ See, e.g., *Implementation of Section 224 of the Act*, Report and Order and Order on Reconsideration, 26 FCC Rcd 5240 (2011); *Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting*, Notice of Inquiry, 26 FCC Rcd 5384 (2011); *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Red 17663 (2011).