

January 9, 2014

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: GN Docket No. 12-353, Comment Sought on the Technological Transition of the Nation's Communications Infrastructure; GN Docket No. 13-5, Technology Transitions Policy Task Force

Dear Ms. Dortch:

On January 8, 2014, I spoke with Jonathan Sallet, General Counsel, with regard to the above captioned proceeding.

I reiterated points made in our comments and reply comments to the public notice in Docket 13-5 that any trial program cannot be irreversible, the network operator must retain the capacity to restore original service until actual grant of Section 214(a) authority. To do otherwise places subscribers at risk and pre-judges the outcome of the trials with regard to the adequacy of the technology tested.

Furthermore, problems in the trial technology may not be immediately apparent. Systems may suffer degradation over time or as they scale. Hidden defects may only emerge over long testing periods. It is precisely to discover such potential problems that trials are necessary. But it is because of the risk of such potential problems that the operator conducting the trial must retain the ability to restore the previous service until the trial is successfully concluded.

Voluntary, “Blind” Study Is Both Methodologically Sound And The Prudent Approach

I also elaborated on the Public Knowledge recommendation of our November 20, 2013 *ex parte* that the Commission require that such studies be conducted in a “double blind” manner. I proposed the following as necessary phase in:

First, the initial trial pool should be voluntary, *not* mandatory. As we saw in the Fire Island experience, consumers are highly resistant to a forced conversion – especially to what they see as an experimental technology that would put them at risk. At a minimum, the FCC should require that trials use a “phase in period” where the initial test pool is voluntary and – only after a suitable period of testing to demonstrate safety and efficacy – involuntarily convert the remainder of the wire center. The network operator can provide incentive to participate in the study, such as free or discounted service for the duration of the trial.

This approach has several advantages. First, it will reserve the “oddball cases,” such as those with heart monitors or other legacy equipment they regard as critical to health, safety or quality of life, for subsequent testing after establishing the initial testing. This is common in clinical

trials conducted by the FDA, where the initial “Stage 2” trial generally excludes subjects that have complications beyond the target condition.

Given the importance of avoiding a Fire Island-type disaster in the initial testing, a phased in approach that leaves the “oddball cases” for subsequent rounds is prudent. Nothing will crash the transition of the phone system to new technologies like a headline that someone died because of a poorly planned or recklessly implemented study. As a matter of self-interest, AT&T and other parties eager for trials should welcome a proven, cautious approach to testing.

To avoid selection bias in favor of new technologies which might also skew the trial results, the trials should follow a “blind” and “cross-population” protocol. The volunteer pool is divided in half. One half is given the new technology, the other retains the existing technology. But neither pool knows whether they are in the test group or the control group. After a suitable test period (3-6 months), *reverse* the population groups. That is to say, those in the test group will have their old technology restored, and those in the control group will now be using the test technology. This approach is common in clinical trials to normalize the data across the entire study population while still maintaining a valid control group.

Small And Midsize Businesses, Local and Federal Government Facilities Create unique Concerns

Small and midsize Businesses remain the most dependent on traditional copper-based services, and a mandatory trial will potentially impose significant unanticipated costs and disrupt normal business operations. As demonstrated in the Fire Island experience, technologies which initially appear adequate for such routine business purposes as credit card processing or ATM transactions may not, in fact, prove sufficiently reliable for these purposes. In addition, many small and midsize businesses – such as pharmacies, real estate agents, and banks – rely on fax machines and other legacy technologies that do not work with IP-based or wireless equipment. This is, after all, why we do trials.

The unique needs of small and midsize businesses, and government agencies, need to be considered when implementing the trials to avoid significant expense and economic loss. This again cautions for an initial voluntary trial, with inducement of free or reduced service during the trial period. Inducement may also include a commitment to help the volunteer pool replace legacy equipment rendered inoperative by the new technology.

These problems are even more critical, and more exacerbated, for federal, state and local government agencies in the trial. Such agencies usually have long budget planning periods and by law do not have flexibility to adapt to new circumstances easily. Trials that render agencies unreachable, or that render legacy equipment inoperative, may interrupt vital government services. Such disruption may have impact well beyond the geographic area of the trial.

Impact On A Wire Center May Extend Well Beyond The Test Area And Impact All Carriers

Finally, it is important to emphasize that a failure of the trial in the wire center may have wide-ranging consequences. The wire center is where all local providers meet to exchange traffic. A trial which shuts down a wire center will potentially shut down access to the PSAPs and may impact the functionality of local cellular providers and cable operators.

In January 2013, AT&T's upgrade of its U-Verse System knocked 70,000 customers offline for 3 days due to a "software glitch." Consider what would happen if an *entire wire center* were offline for 3 days due to a similar "glitch" in the trial. An entire region would be in communications blackout because the cellular networks and cable networks that operate in those regions would likewise be impacted.

In addition, the impact would radiate far beyond the impacted wire center. People trying to call into the impacted area would be unable to do so. Nor is it foreseeable what broader impact a network failure might have to other wire centers. It is the nature of a network that it is interconnected, and an unanticipated failure of technology in one wire center may have ripple effects in other wire centers.

As noted above, it is precisely to identify such potential hazards that trials are necessary. But the possibility of such failures requires that trials proceed with appropriate safety measures and controls. While the possibility of a wide-scale disaster may seem remote, the fact that system failures with broad geographic impact have already occurred in the more limited environment (e.g., the AT&T U-Verse outage last year, failure of Voice Link on Fire Island) means that such catastrophic scenarios must be considered as possible outcomes and planned for. Put another way, we cannot dismiss the possibility that a software glitch could knock an entire IP-based network offline as "impossible" when it has already happened.

The Responsibility Of The Commission To The Public And The Future Of The Transition

The Commission has managed numerous technological upgrades of the phone system, as well as several upgrades of the CMRS system and the DTV Transition. As the Commission knows, any transition has its enthusiasts eager to deploy new technologies, and its detractors who wish to retain their existing systems that they know and understand. The Commission has the responsibility to strike the right balance between moving the technology forward while protecting vital communications infrastructure on which our lives and our economy depend.

Importantly, to maintain public trust in the transition, the Commission and those companies transitioning the phone system must not appear reckless or insensitive to the cost that the transition may impose. Especially at this early stage, a mandatory trial that alienates the trial community, imposes economic hardship on local businesses, or disrupts government services could have significant negative consequences for the future of the transition. By contrast, a well executed set of trials will not only inform policy, it will promote public confidence in the transition.

Those who insist that "the market" has already lead the transition would do well to remember how "the market" on Fire Island reacted to being made mandatory participants in the

first geographic area “trial” of Voice Link. To refuse to learn from this experience would be profoundly irresponsible and potentially deal a severe set back to the transition. The Commission should therefore reject pressure from techno-enthusiasts and companies eager to deploy new technologies to proceed in a way that could give rise to accusations of recklessness in the event things go wrong.

In accordance with Section 1.1206(b) of the Commission’s rules, this letter is being filed with your office. If you have any further questions, please contact me at (202) 861-0020.

Respectfully submitted,

/s/ Harold Feld
Senior Vice President
PUBLIC KNOWLEDGE

cc: Jonathan Sallet