The Phone Network Transition: Lessons From Fire Island

In October 2012 Superstorm Sandy struck the northeast United States, causing over $60 billion in damage and over 70 deaths. The storm devastated many public utilities, leaving people without electricity, water, and phone access.

In Fire Island, NY, Verizon responded to the storm's damage by replacing its landline copper phone and DSL network with a new fixed wireless service called Voice Link. The proposed permanent switch to Voice Link prompted unprecedented consumer outcry, particularly after the New York State Public Service Commission (NYPSC) required Verizon to publicly file its Voice Link Terms of Service. As hundreds of customer complaints revealed, Voice Link does not provide its own power—as the copper network had—and is not compatible with alarm systems, medical monitoring services, fax machines, credit card machines, collect calling services, and some international calling cards. Unlike the copper network, Voice Link does not provide internet access, and Voice Link's Terms of Service disclaimed liability if 911 calls failed to go through due to network congestion.

After a barrage of consumer outrage and investigations by the NYPSC and the Federal Communications Commission (FCC), Verizon announced that it would replace its Fire Island copper network with a fiber network instead, leaving Voice Link available for those customers who choose to use it.

As more communities across the US find themselves facing the advent of new communications networks that may not have all of the capabilities and protections consumers are accustomed to on the traditional phone network, users, regulators, and carriers must remember the lessons we can learn from the events in Fire Island. The phone network transition holds great potential, but it is up to the public and their representatives in government to make sure the network continues to serve users first.

New Communications Technologies

Lesson 1: Customers can recognize when new services are inferior to what they had before.

Even though Verizon originally lauded Voice Link as a next-generation technology that would provide better service for lower prices, customer outcry revealed that the real, everyday Americans using Voice Link were utterly dissatisfied with it. The comments consumers submitted to the NYPSC were clear: Fire Island residents viewed Voice Link as an inferior service that failed to meet their needs.

As a basic matter, residents found Voice Link's lower quality of service made it difficult to understand the person on the other end of the phone. Ellen Anderson wrote, "The most basic measure of any phone service is Clarity and on this measure, VoiceLink is a non-starter. Imagine all the garbled messages of your personal cell phone and multiply by a factor of 20! That is VoiceLink. People can accept a certain level of

garble and dropped calls from their cell phone as a trade-off for cellular convenience. But this is intolerable on a home phone. Imagine not being able to hear or understand emergency calls!"

Residents also complained they could not use services on Voice Link that had previously worked on the copper wireline network. Phyllis and Herbert Hildebrand wrote, "We need Life Alert systems, our home alarm system and communication with the outside world, especially in times of weather disasters such as the recent Hurricane Sandy. During that storm, which caused electrical power outages, our cell phone also failed. Our landline made it possible for us to contact our son and daughter, as well as emergency sources, should it become necessary."

Those who had been relying on the wireline network were also left without an adequate internet connection. Keith B. Stein noted that he had previously subscribed for unlimited DSL internet access service for $30 per month, while wireless data service cost $80 for 10 GB per month. He wrote: "Those 10 GIGs just get me and my family through a month of email, normal levels of work related internet use, and basic household internet usage…. One could easily spend hundreds of dollars or more per month, at Verizon's rates, in order to regain the amount of data we previously had pre-Sandy."

Fire Island residents' response to the limitations of Voice Link make it clear that customers are paying attention when carriers transition their networks, and customers know when new "next generation" networks don't actually serve all of their needs as well as the previous networks did. Americans relying on the phone service they've used for decades have a right to expect a communications network as good, or better, than what they had before the transition.

Lesson 2: New, untested services can have serious problems.

When Verizon first rolled out Voice Link to Fire Island, Verizon was eager to tell subscribers that Voice Link offers "the same 911 support" and "many of the same voice features and functions" as their old landline phones did. When Verizon did the same in New Jersey, it even sent around a mailer saying "Our technicians connect Voice Link into the telephone lines in your home, allowing you to use your home telephones to make and receive calls just like you did before" to impress upon customers how little difference they would notice between Voice Link and their landline phone service. However, as the service reached customers in the real world it became clear that Voice Link had many serious limitations that apparently had not been sufficiently examined before Verizon tried to replace landline phone service with Voice Link.

Before the summer of 2013, the NYPSC required Verizon to submit a filing that belied Verizon's frequent public pronouncements that its Voice Link service is basically the same as its former copper network service. In that filing, Verizon revealed that Voice Link service would be significantly limited compared to the wireline service Fire Island residents were used to. The following is a list of some of the limitations and problems revealed in the Voice Link Terms of Service:

- Verizon specifically stated that users should expect that 911 calls may be blocked by congestion on the network, or subjected to slower routing or processing speeds. Even if the 911 failure was caused by Verizon's negligence, Verizon limited its own liability for any resulting damage.
- The customer was responsible for maintaining power to the Voice Link device, in addition to making sure their actual phone was powered. The user was responsible for recharging the back-up batteries, or buying more commercial batteries if they had an updated Voice Link device. The Voice Link device battery would only last for 2.5 hours of talk time, and 1.5 days if left unused.
- Voice Link would not work with medical alerts or other monitoring services.
- Customers would not be able to use Voice Link for internet access, unlike the DSL offering that was available over the copper network.
- Voice Link was not compatible with fax machines, DVR services, or credit card machines, and might not be compatible with home security services.
- Voice Link customers would not be able to receive collect calls.
- Customers must buy a separate international calling plan to make international calls, and Voice Link won't allow customers to use calling cards to make international calls.
- Voice Link did not allow customers to make 500, 700, 900, 950, 976, 0, 00, 01, 0+, calling card or dial-around calls.
- Voice Link required 10-digit dialing, so users would need to dial an area code even when making a local call.

One common theme among all of these new limits on Verizon's Fire Island voice service was that Voice Link's failings all hit the most vulnerable the hardest. Users trying to reach 911, customers with no electricity, sick or elderly patients using medical alerts, subscribers with families living abroad, and the loved ones of prisoners making collect calls would all feel the consequences of Verizon's experiments the most.

Lesson 3: Supposedly "outdated" technologies can still have a significant number of people depending on them.

It is also important not to dismiss the value of pre-existing technologies simply because the percentage of the population depending on them is below some arbitrary threshold of importance. A minority of the population uses wireline phone service to support their Life Alerts, but that percentage will fight for Life Alert support as if their lives depend on it—because they do. And while the percentage of the population solely using landline phone service for their communications has decreased, those users have stuck with the copper network precisely because it offers benefits to them they can't find anywhere else.

The public outcry against Voice Link in Fire Island showed that the consumers who still use copper-based services think that copper-based services still matter. There is a "long tail" of services from Life Alerts to calling cards to security systems that many people use. No one of these may have a lot of customers, but when you add them all up it translates into millions of people depending on copper who will be left out in the cold—and outraged about it—if the replacement service does not do the same thing, especially when they are forced to migrate rather than given an option.

The fact that a service is newer does not in itself mean that service is better in all respects than the preceding technology. Fire Island's experience reminded us all that fixed wireless services can vary significantly in reliability, quality of service, and supported features if regulators do not take active steps to make consumers whole. This is not to say that new technologies can't be upgraded to serve those same needs, but we cannot assume that we can simply force entire populations to convert to new technologies without understanding why and how those users depend on the existing infrastructure.

Transitioning to New Services

Lesson 4: Do not use natural disaster victims as guinea pigs for a new type of communications network.

Post-Sandy Fire Island was the first time and place Verizon decided to use Voice Link to completely replace the copper network. No one had any information about whether Voice Link was robust enough to be the only option for basic phone service, or any real-world information for how customers would respond to Voice Link when they suddenly had no choice to use a wireline option instead.

To make matters worse, Voice Link was imposed on Fire Island residents while the community was still recovering from a devastating natural disaster. When residents are rebuilding or repairing their homes and local businesses are deciding whether it is worth it to rebuild their presence in a community, reliable access to voice and internet services is a prerequisite for a strong recovery.

Lesson 5: Forcing conversion to new services upsets consumers.

When a carrier unilaterally decides to retire an existing service and replace it with a new one, customers are cut out of the decision-making process completely. No one likes feeling abandoned and having no other option but to take a new service, especially when that service is the platform for their business, personal, and emergency communications.

The fact that some users have voluntarily switched to new services or added new services onto their existing ones does not mean that the customers who have chosen to remain on the existing service simply forgot to switch over. A forced migration makes all users accept the new service, regardless of whether that service actually meets their needs.

As explained above, forcing people off of the copper network impacts their ability to reliably access services like health monitoring or 911, in addition to affecting their access to other features like credit card processing, security alarms, and fax machines. The best way to transition these customers onto a new network is to offer them compelling solutions that continue to serve the same needs as the previous network, not forcing customers to migrate to new services without knowing whether their needs will be met on the new network.

Lesson 6: Carriers need guidance on how to repair or replace their networks after natural disasters.

Part of the difficulty for Verizon's Voice Link deployment in Fire Island was the dearth of guidance for a carrier seeking to replace a damaged network with a new service instead of repairing the existing infrastructure after a natural disaster. It was—and still is—unclear what a carrier's obligations are when it seeks to rebuild after a disaster. This is why Public Knowledge and 18 other public interest organizations have filed a letter[1] with the FCC asking the FCC to start a proceeding to provide this guidance, so that all carriers—and more importantly, all Americans—know what to expect when rebuilding their communities.

Even as Fire Island moves on, many questions remain for the next community to face this situation. When a disaster strikes, when must a carrier notify customers of its plans for the network? How should it contact them? When should it notify the relevant state and federal agencies? How should a carrier and the agencies determine whether a new service is an adequate replacement for the traditional network? When and how should actual consumers be involved in the decision-making process? If the new service can't replicate the features of the old network, how should users be made whole?

The Role of Regulators

Lesson 7: Both federal *and* state agencies need to be able to protect consumers.

It is important to acknowledge that without the NYPSC and the FCC providing regulatory oversight, nothing would have stopped Verizon from rolling out whatever service they thought "good enough" for a local community with no other provider, regardless of what the customers wanted or needed.

The NYPSC proved critical in making Verizon disclose more details about Voice Link publicly and in establishing that Voice Link would not become a permanent solution unless it could demonstrate to the NYPSC that it would serve residents' needs. The NYPSC also collected hundreds of public comments in which real customers described the ways that Voice Link failed to meet their needs and did not live up to their expectations compared to the copper network.

Importantly, the NYPSC could not have played such an important role if New York had deregulated its treatment of phone services, as many states already have. If the NYPSC had been hamstrung by deregulatory legislation, it never could have opened an inquiry that provided a platform for outraged citizens, which eventually caught the attention of the press. Without this pressure and the threat of enforcement, Voice Link might still be the only option for Fire Island residents.

For its part, the FCC held strong in making sure that Verizon filed an application to change its network under Section 214(a) of the Communications Act, and also opened a public docket for stakeholders to voice their

[1] http://www.publicknowledge.org/files/ConsumerHurricaneGuidanceLetter.pdf

concerns. The FCC also rightly removed Verizon's application from the default streamlined treatment to make sure it had time to thoroughly consider the issue before the application was approved.

Without these important public forums to provide a focus for these complaints, and without the threat of regulatory backlash, no one would have any reason to believe that customers were unhappy, and Verizon could have simply forced them to take whatever it wanted to provide. Instead, people stood up for themselves and forced Verizon to respond.

Lesson 8: Federal and state agencies are critical in making carriers explain their plans to the public.

In addition to collecting public comment and threatening enforcement, both the NYPSC and FCC helped the public understand what was going on by requiring Verizon to submit information about its service. This was critically important at a time when Verizon would only give the press vague promises of how great Voice Link would be, and would generally assure customers that Voice Link would mostly be the same as copper-based phone service without actually explaining all of the differences.

When the NYPSC required Verizon to submit its Voice Link Terms of Service and explicitly list the limitations of Voice Link, the public was able to understand the full implications of Voice Link's problems for the first time. Similarly, the FCC's procedures for confidential information allowed members of the public to sign protective orders to gain access to more detailed information about Voice Link and how it was selected and deployed.

Without the NYPSC and FCC, the public may never have obtained access to this level of information, which would have hobbled their ability to make well-supported arguments against the forced conversion to Voice Link.

Lesson 9: Customers can make a difference when they speak out to their governments.

Perhaps the key event that led to Verizon's decision to deploy fiber in addition to Voice Link was the tremendous outcry from Fire Island residents. Users numbering in the hundreds filed complaints before the NYPSC and FCC, which helped change the tide against the forced conversion to Voice Link. When consumer advocates joined the fight on the state or federal level, they could point to and pull from those complaints to show policymakers exactly how serious the limitations of Voice Link were.

However, currently in many states people do not have recourse at the state level for this kind of problem, so their only hope would be at the federal level. Users living in deregulated states should actively engage their federal legislators for protections and ask their state legislators to reinstate the protections they voted away. Customers in states considering deregulation should be active against such actions.