

Remarks of David Turetsky
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As Prepared for Delivery

Good afternoon. Thank you for that warm welcome and for inviting me to address the 2013 session of 9-1-1 Goes to Washington.

It is always an honor to speak to the men and women on the front lines who provide 9-1-1 services and emergency response to the American people. The work you do every day is simply amazing, and the work you do when a major crisis hits is even more so, as has been proven repeatedly over the last nine months.

I had the opportunity to speak to the NENA community at the NENA conference in Long Beach, California back in June 2012. At that time, “derecho” and “superstorm” were not on the list of new dictionary words and “Newtown” was just a place in Connecticut that few knew.

These events highlight the importance of bringing critical communications up to date with modern technology. We know that on any given day, at any given hour, you must face every emergency challenge thrown your way. Whether the emergency is large or small, the safety of our communities requires you to have effective communications tools.

Today I want to talk about what we at the Commission are doing to try to help you meet this challenge.

First, we are looking at what we need to do to enhance 9-1-1 reliability and resilience, particularly in light of the lessons learned from last year’s derecho and Superstorm Sandy. Next, we are focusing hard on developing the path to text-to-911 and Next Generation 9-1-1. And finally, I will touch briefly on where we stand with respect to location accuracy and non-initialized phones.

First: 9-1-1 Reliability and Resilience

On June 29, 2012, a fast-moving weather storm called a derecho tore across the Midwest and through the Mid-Atlantic and Northeastern regions of the country. In less than 12 hours, it caused billions of dollars of physical damage and 22 deaths.

It also caused millions of Americans to lose electrical power and severely disrupted the networks of service providers that serve 9-1-1 facilities. There were isolated breakdowns of these networks in Ohio, New Jersey, Maryland and Indiana, and systemic failures in northern Virginia and West Virginia.

Seventeen public safety answering points (PSAPs) in three states lost service completely, affecting the ability of more than 2 million people to reach 9-1-1 at all. Seventy-seven PSAPs serving more than 3.6 million people in six states lost some degree of connectivity, such as location information.

Because at the FCC we understand the importance of 9-1-1, the seriousness of what you do, and the danger these outages can create, immediately after the storm we launched an extensive inquiry into what caused these communications failures and ways to prevent them in the future. You may particularly be interested to know that this inquiry included interviewing representatives from 28 PSAPs, along with eight carriers, and many public officials and companies, and reviewing thousands of pages of documents, including public comments. The Bureau staff worked tirelessly and issued a comprehensive report in early January.

In our *Derecho Report*, we found that 9-1-1 communications were disrupted in large part because of avoidable planning and system failures by carriers, including the lack of functional, properly tested and maintained backup power in central offices. Monitoring systems also failed, depriving communications providers of visibility into critical network functions.

In most cases, these problems could and would have been avoided if carriers had carefully implemented industry best practices and available guidance. Their failure to do so was simply unacceptable. Because serious problems resulted from best practices not being followed, the Bureau made a number of recommendations in the report for further action by the Commission.

And tomorrow, the Commission will take the next step. It will consider launching a proceeding seeking public input on the Bureau's recommendations. Those recommendations were that the Commission consider action to ensure that service providers conduct periodic physical audits of 9-1-1 circuits; maintain adequate backup power and follow regular maintenance and testing procedures at relevant central offices; and have adequate network monitoring links. Of particular note for this audience, because notification to PSAPs of outages was a problem in the derecho, the Bureau also recommended that service providers take on a more specific obligation to notify 9-1-1 call centers of breakdowns of 9-1-1 communications.

In this proceeding the Commission would be asking a lot of questions, seeking as much information as it can get on these important issues that I think matter to you. Please don't leave it to someone else to respond. Yes, NENA will make a filing, and certainly a very good one, but more will be helpful. The Commission would also benefit from hearing from you directly, on the record, during this rulemaking.

As if the derecho was not enough of a wake-up call, in October, Superstorm Sandy devastated significant portions of the northeastern United States, causing billions of dollars of physical damage along the Eastern Seaboard and 146 deaths. Unlike the derecho, Sandy's arrival was anticipated and predicted with considerable accuracy, which gave communications providers time to prepare and implement emergency plans.

But Sandy also had an incredibly destructive effect on communications infrastructure. Again, millions lost electrical power and communications networks were severely impacted. This time, however, unlike the derecho, most of the impact was on communications services other than 9-1-1 – that is, fewer PSAPs were shut down hard or lost location and number information.

On the other hand, the communications tools used to initiate emergency calls to seek help were severely affected. For example, about 25 percent of mobile antenna sites went out of service over an area that included all or part of 10 states and the District of Columbia. And New Jersey and the parts of New York that we were tracking were impacted much more severely than that.

Now we are looking at the broader implications of Sandy and other major disasters in order to find ways to make communications networks more resilient. This past month the Commission held two hearings. The first, in New York City and in Hoboken, New Jersey, focused on the impact of Sandy on communications, the response, and access to information during the aftermath. The second hearing, held in California, focused on how innovative network technologies, smart power solutions, social media and mobile applications might improve information and communications network resiliency in times of disaster.

One interesting thing we learned about 9-1-1 during Sandy was that there was a significant spike in attempts by the public to text to 9-1-1, all of which, unfortunately, were unsuccessful. With text-to-911 not yet a reality in the affected area, people went to Twitter for help, giving an important and unexpected role to the New York City Fire Department's social media expert, Emily Rahimi, who sent and received tweets from individuals in need of help, and relayed them successfully to public safety.

After the field hearings end, we will consider options to address the information gathered, particularly broader issues of network reliability and resiliency that were not the focus of the *Derecho Report*.

Second: The Road to Next Generation 9-1-1

We must make our existing 9-1-1 infrastructure work well, even as we develop plans to migrate to NG9-1-1.

NG9-1-1 will help you. NG9-1-1 will improve system resilience, and improve connections between 9-1-1 call centers. It will not only support traditional voice 9-1-1 calls, but also the transmission of text, photos, videos, and data.

Next Generation 9-1-1 also will provide PSAPs with improved analytic capabilities. This will enable PSAPs to better adjust staffing levels and network capacity to fluctuations in call volumes, enable faster detection and remediation of service failures, and perhaps identify and resolve quickly denial-of-service attacks that currently are sometimes not even *detected* – much less resolved – for weeks.

One of the First Steps Toward NG9-1-1: Text-to-911

Even in this increasingly text-based world, we start from the premise that voice calling to 9-1-1 remains the preferred option in most situations. It is the gold standard.

So why do we care about text-to-911?

First, text may be the only effective means for a person with a hearing or speech disability to reach out for help.

Second, there are times that a voice call may place someone in danger, such as in a live shooter situation or domestic abuse.

Third, when voice networks are congested, text messages may have a better chance of getting through.

Finally, multiple text messages can also be opened at the same time, enabling PSAPs to prioritize life-threatening emergencies, moving the most pressing messages to the top of the queue. That's not happening with phone calls that are not yet answered. For all of these reasons, it is vital that even as we consider the longer path to NG9-1-1, we start by addressing text messaging in the short term.

We have been working diligently with PSAPs, carriers, consumer groups, and other stakeholders to achieve this first step. Even though text-to-911 has only been deployed on a limited basis so far, it has already prevented harm and saved lives.

Is anyone here from the State of Vermont? Yes? Congratulations. Vermont launched its text-to-911 pilot program in early 2012 and has had several instances in which text-to-911 has proven effective. In one case, a text message to 9-1-1 resulted in emergency personnel being able to thwart an attempted suicide, and in another, a domestic abuse victim was able to contact 9-1-1 and have her abuser arrested.

Is there anyone here from Black Hawk County, Iowa? They can cite similar success stories of text-to-911, enabling emergency personnel to come to the aid of domestic and child abuse victims. For example, an endangered child texted from the backseat of the car and responders reportedly met the car in the driveway.

You heard yesterday from David Furth, Tim May, and Aaron Garza about our pending rulemaking on text-to-911, which builds on the voluntary agreement that NENA, APCO and the four largest wireless carriers negotiated in December to make text-to-911 service available by May 15, 2014, to all PSAPs who request that service. I won't repeat the details of that presentation but I want to emphasize what this means for PSAPs.

It is important to emphasize that none of the steps we are contemplating require PSAPs to implement text-to-911. That is beyond our jurisdiction, and it is a decision that is properly left to PSAPs themselves and their governing authorities. We also know that many PSAPs have

concerns about text-to-911 and NG9-1-1. What will it cost? Will it create new and overwhelming demands on 9-1-1 call-takers? How can we absorb these changes in an era of shrinking resources? These are totally understandable questions.

But, with all due respect, let me suggest that PSAPs that are hesitating need to ask another question: How can we afford *not* to move forward? You heard about lives saved and other successes already through the text trials; technology is changing, and so are public expectations, and the opportunity to meet those expectations and improve public safety at the same time is in front of us. The four largest carriers will be ready to provide text-to-911 nationwide in a little over a year and some are already doing it in some locations.

So, from this perspective, the ball is really in the PSAPs' court. Now is the time to try to step up and talk to those who have implemented text-to-911, like York County, Virginia. They've gone through the preparation of pre-written text response messages and worked through myriad questions and issues related to the service. I would challenge you to embrace and shape the change that is coming rather than try to put it off. Please do your best to step up; if you do, we will be there to help you in every way we can.

Next Steps Toward NG9-1-1: The FCC Report to Congress

Beyond text-to-911, we have been taking other steps to encourage the evolution of the nation's emergency response networks to NG9-1-1. One of the most important of these was a report we submitted to Congress last month with recommendations on how to address legal and regulatory barriers to this transition.

Most of the time, Congress does not ask us what we think they ought to do. But in this case, Congress specifically asked us for recommendations on NG9-1-1. Again, you have already heard some of the details of our recommendations, so I won't go through them all, but I'd like to take a moment to highlight one or two of the report's findings and recommendations.

First, we told Congress what you already know: the 9-1-1 system has traditionally been managed at the state and local level, and the transition to NG9-1-1 must necessarily also happen at this level. We also believe, however, that the federal government and Congress can play a key role in assisting these efforts.

The report's lead recommendation is for Congress to help encourage states to become "early adopters" of NG9-1-1. Let's incentivize a race to the top to promote public safety implementation of NG9-1-1. We made this recommendation because we think that early adopters are the key to accelerating the overall NG9-1-1 transition. Early adopters can try out new models and technologies, deliver the goods, and generate valuable experience with NG9-1-1 implementation that other states can follow, making it easier and faster for all.

I would also like to briefly mention the potential importance to NG9-1-1 of the network that FirstNet is building. They are complementary. A next-generation PSAP may serve as a hub for data as it comes in from 9-1-1 callers, telematics providers, and others, and may then push the

relevant data out to the first responders, perhaps using the FirstNet network. This is the data-rich future for which it is imperative that we lay the foundation now.

Third: Location Accuracy

We are also continuing to move forward on issues relating to improving location accuracy both for existing 9-1-1 services and for Next Generation services. In our Report to Congress, we recommended that Congress promote the development of location technologies that will support all NG9-1-1 applications, regardless of the network or device used by the caller.

Closer to home, one of the most interesting recent developments in this area has been the work done on indoor location by our Communications Security, Reliability, and Interoperability Council (or CSRIC), an advisory council to the Commission.

We know that indoor location is critical because consumers are increasingly relying on mobile wireless communications, and many wireless 9-1-1 calls are now made from indoors, where traditional location technologies such as GPS may not work. In addition, locating callers in indoor environments may involve not only pinpointing the location of a building, but what floor of the building the call is coming from (the so-called “z axis”).

To help meet the challenge of indoor location, CSRIC last year developed a “test bed” in the San Francisco Bay area, to test location technologies in different types of in-building environments. These tests were conducted in December, and at its meeting just last week, CSRIC issued a report with the test results. The results provide valuable data that the Commission can use in formulating future policy on indoor location.

Fourth: Non-Service Initialized (NSI) Phones

Let me also mention the latest developments to achieve our common goal of eliminating harassing calls to 9-1-1 from non-service initialized (NSI) phones.

Since the mid-1990s, our rules have required NSI phones to be 9-1-1-capable. This was a measure supported at the time by NENA and the 9-1-1 community, and it has provided significant public safety benefits over the years. Increasingly, however, PSAPs have been plagued by callers who use NSI phones to place harassing non-emergency calls, knowing full well that the PSAP cannot identify the caller. These calls divert precious PSAP time and resources from responding to genuine emergencies.

In 2008, responding to a petition from NENA and others, the Commission issued a Notice of Inquiry on this topic. In light of the concerns raised at the time, one of the options on which we sought comment was whether the Commission should eliminate the 9-1-1 call-delivery requirement for NSI phones. Some public safety commenters thought this was a good idea, while others, including NENA, argued that the requirement should be retained and that we should focus on other ways to identify and block harassing 9-1-1 calls from NSI phones.

Recently, however, NENA has told us that circumstances have changed and that the original NSI phone rule may now be doing more harm than good. NENA contends that other programs for low-income and at-risk individuals have supplanted the need for NSI phones to support 9-1-1 calling, and therefore suggests that the Commission should now consider phasing out or eliminating the requirements. In light of this development, we have issued a public notice to refresh the record, and we encourage all interested parties to comment, whether they agree or disagree with NENA's updated view. Either way, we remain committed to helping the 9-1-1 community find effective solutions to harassing calls.

Conclusion

At the Commission and the Bureau, we place the highest priority on helping to ensure that you have emergency communications systems that perform even under extreme conditions; that incorporate all the advantages that new technologies have to offer; and that enable you, who are on the front lines, to continue to provide a level of emergency response unmatched anywhere else.

We spend a lot of time working hard on issues that affect 9-1-1, and that affect you, because the good of our nation requires it. Thank you to NENA and its members for all that you do to protect the safety of life and property.