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INTRODUCTION

Thank you.

Thank you for inviting me to be here today. It is an honor to be with you this morning.

It's also an honor to follow Marlee Matlin. And she is a really hard act to follow. Academy Award and Golden Globe winning actress, producer, novelist, devoted advocate for disability rights - I can't imagine a stronger voice to bring attention to the issues facing the 911 community. I have admired her for a very long time.

The last time I had the opportunity to speak before this convention, I had only been on the job for three weeks. I had never experienced a derecho, or even knew it was a weather term, and I still liked the name Sandy.

We've experienced a lot together since then. Over the past year, I've met with many of you directly. I've toured your facilities. We've met at the FCC. You've come to D.C. My appreciation of what you do has only deepened.

I am never surprised at the vital role you play, not even when I heard that the unprecedented manhunt for the surviving Boston Marathon bombing suspect only ended after a boat owner's call to 911 led to the suspect's capture.

We share common goals. Improving 911 communications and laying the groundwork for Next Generation 911 are priorities for the FCC. Today, I am going to focus on three areas within those priorities.

First, the legacy 911 system must function at its highest level, but it can only do so if the underlying communications networks are working reliably. So I'm going to discuss what we've learned about the reliability and resiliency of that critical network infrastructure.

Second, and vital to the future of emergency services, I'll review some of our efforts and progress to facilitate the transition to Next Generation 911, or NG911. As part of this topic, I'll talk about key capabilities such as text-to-911, the opportunities and greater resiliency of IP-based networks, the opportunity to capture and analyze key data, and the importance of enhancing location accuracy.

Finally, I'm going to pose a challenge to you. I might even pose more than one.

Reliability of Critical Networks

This past year has been a challenging one for the Nation's 911 call takers and the legacy 911 system. Major emergencies have severely tested the 911 system and, unfortunately, revealed critical reliability and resiliency issues.

Chief among them was the June 2012 derecho storm that disrupted communications networks affecting seventy-seven (77) PSAPs serving more than 3.6 million people in six states. Seventeen (17) of those PSAPs were knocked completely out of service for some period of time. This left millions of Americans unable to reach 911 in the wake of this emergency.

And it is why the Public Safety and Homeland Security Bureau immediately launched an in-depth inquiry into the causes of the 911 network failures and what could be done to prevent them from happening again.

Our inquiry was based in part on telephone interviews with twenty-eight (28) of the affected PSAPs, and review of comments provided by NENA and others in the public safety community. Thank you for your help.

In January, we issued a comprehensive report on our findings and made recommendations to address the key problems we identified. What we learned was very disturbing. Most of these problems could have been avoided if communications providers had carefully implemented industry best practices and available guidance.

Their failure to do so was simply unacceptable.

Just two months later, in March, the Commission acted on the Bureau's recommendations by proposing rules to improve the reliability and resiliency of wireline communications networks that serve 911 call centers, especially during disasters.

Our proposed rules seek to ensure that service providers implement vital best practices in network design, maintenance, and operation.

The Commission will consider whether to adopt these proposals as final rules. But you don't have to wait for us to take final action. There are four key areas that we are looking at, where you can act as well.

First, we are exploring what requirements need to be in place to ensure carriers are appropriately auditing circuits, for example to learn where those circuits are located so that there is physical diversity. If you are not doing so already, you should be asking your carriers what their auditing schedules are.

Second, the derecho raised many questions regarding backup power for central offices. We're looking at various requirements to ensure these facilities are tested and powered, no matter the weather conditions. You should verify what back-up power provisions your supporting carriers have put in place.

Third, 911 service providers must have the ability to monitor the status of their networks. Again, this should be a topic of conversation with your serving carriers.

And **fourth**, 911 service providers need to communicate early and often with PSAPs during any disruption of 911 service. We're proposing to clarify how service providers can more effectively and uniformly notify PSAPs of outages affecting 911 service and cooperate to restore service as quickly as possible.

Towards this end, as of June 11, you can send emails directly to the Commission to alert us to service outages and to request assistance. The email address - "**psapreport@fcc.gov**" – is monitored 24/7 by the FCC Operations Center.

We encourage you to take advantage of this tool when you lose commercial service or experience other types of outages that impair your ability to communicate with the public.

If last year's unexpected derecho in June was a wake-up call about the readiness of the wireline networks that serve PSAPs, Superstorm Sandy, which hit in October, was an alarm of another sort.

Sandy arrived with far more warning, but still taught a major lesson about network resiliency. It devastated significant portions of the northeastern United States and had an incredibly destructive effect on communications tools used by the public, particularly on the wireless networks from which most calls for help to 911 originate, as you know.

At the peak of the storm, about 25 percent of cell sites went out of service over the area that we were tracking closely, which included all, or part of 10 states and the District of Columbia. In some of the hardest hit counties within New Jersey and New York, however, the outages were more than double that figure.

If there is ever a time communications networks matter most, it is when disaster strikes and you need to reach emergency help and loved

ones. Spurred by the experience of Superstorm Sandy, the FCC convened a series of hearings.

We examined challenges to communications network reliability and actions to help consumers communicate during and after disasters - from hardening communications infrastructure to innovative network technologies, smart power solutions, social media and mobile applications.

The hearings produced a number of proposals, such as requiring certain levels of back-up power at cell sites. On that subject, carriers argue that such a requirement would reduce their flexibility on how best to make their networks more resilient.

Another approach mentioned was providing consumers with more information on how specific wireless carriers' networks perform during disasters. That idea could allow carriers flexibility in how they make their networks more resilient, but hold the carriers accountable for their decisions by allowing consumers to make head-to-head comparisons of the results, possibly spurring better carrier performance through competition.

We are considering the best approach to address the problems that arose from Sandy.

Promoting NG911

We all agree that we have to maintain very high levels of effectiveness in our legacy 911 system.

But let's be frank – there are significant long-term challenges. Aging infrastructure and advances in communications technologies and applications could cause the current system to fall behind in important respects.

For example, most Americans have smartphones. That means they carry in their pockets or handbags the ability to text and send video, data and photos to friends and family. These tools can also be valuable in an

emergency – for instance, a photo of an accident can help inform the emergency responders who are en route to the scene.

Yet Americans can't use most of those tools to reach 911 call centers. That's because most PSAPs still lack the networks and equipment necessary to handle the information. And beyond that, legacy networks generally are not as resilient and reliable as more modern IP networks.

The challenge is before you and so is the opportunity: using IP-based technology to deliver and process 911 traffic will facilitate interoperability, system resilience, overload handling, and enhance accessibility of 911. These are among the key lessons to be learned from the derecho.

You already know from our derecho report and the pending rulemaking that the Commission will not tolerate preventable network failures that harm 911 capabilities and diminish public safety.

At the same time, the Commission is working to enable 911 call centers to accept more types of widely used communications, because we know that it will take time to get full NG911 deployment nationwide.

Text messaging in particular enjoys wide consumer use. Yet, if you send a text message to 911 in most parts of our country, it probably won't be received.

Texting during an emergency matters for the tens of millions of Americans with hearing and speech disabilities.

It matters when a voice call may place someone in danger, such as in a live shooter situation or domestic abuse.

It matters when voice networks are congested and text messages may provide an alternate means of getting through to 911 call centers.

And it matters because it enables your call centers to prioritize life-threatening emergencies, moving the most pressing messages to the top

of the queue. That doesn't happen 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 NG911, we try to save lives and enhance public safety by addressing text messaging in the short term.

If you are hesitating about adding text capability in your PSAP, I encourage you to talk to the PSAPs that have deployed text-to-911.

They can tell you stories of lives saved and crimes as a result.

They can also tell you that with good planning and consumer outreach, they have successfully integrated text into their operations without significant strain on their resources.

I know they understand that in **Vermont**. [Is anyone here from Vermont?] Vermont launched text-to-911 in early 2012 and reports that texts to 911 enabled first responders to intervene in suicide attempts, and a domestic abuse victim was able to contact 911 and have her abuser arrested.

Anybody here from **Frederick County, Maryland**? In March, Frederick County became the sixth major jurisdiction in the country to begin supporting texts from Verizon customers, an important development especially for the hundreds of students attending the Maryland School for the Deaf there. Frederick County will now serve as a model for the rest of Maryland.

Anybody from **Maine**? Earlier this month [June 4], the Maine Department of Public Safety announced that text-to-911 service will be available statewide to any Verizon customer.

And next month, Verizon customers in **Collin County, Texas** will soon be able to send text messages to 911.

Is anyone here from Black Hawk County, Iowa; or Durham, North Carolina; or Tennessee? Each of these areas has made the decision to

move forward with this opportunity to improve the safety of their citizens.

And **York County, Virginia**, led by the irrepressible Terry Hall, has implemented text-to-911 with Verizon and is preparing to do so with AT&T.

Allow me, then, to congratulate all of these jurisdictions and the others I didn't mention that are moving forward.

Congratulations to NENA for its work with APCO and the four largest wireless carriers to speed implementation of text-to-911. The carriers agreed to ready their networks no later than May 2014 to support requests for text-to-911 service from any PSAP. That landmark agreement was reached just prior to our action proposing to require that all wireless carriers and text messaging providers offer text-to-911.

So now you know when you can count on the major carriers being ready to make text-to-911 a possibility for the vast majority of U.S. wireless subscribers. They are stepping up. But their commitment raises an important question: if they build it, will you, the PSAPs, come?

To help you answer that question, the Commission is putting the necessary rules in place. As a first step, the Commission recently adopted rules to require all wireless providers and interconnected text messaging providers to send a bounce-back message when consumers attempt to text 911 where text-to-911 service is unavailable.

The deadline for them to implement this capability is September 30. In fact, the four largest carriers volunteered to start offering bounce-back messages by June 30, and they all are already doing this.

Our rules also now require these text messaging providers to enable PSAPs that accept texts to request for any reason that carriers temporarily suspend text-to-911 service, such as due to network congestion, call taker overload, PSAP failure, or a security breach, and to request resumption of text-to-911 service after a suspension. In

addition, during a period of suspension, the text messaging provider must send an automatic bounce-back message if consumers text 911.

We are also creating a web page to provide clear, simple answers for consumers on what they can expect in the coming months regarding text-to-911 service. That website will be up before the end of the month.

Moving forward, the Bureau is hard at work preparing recommendations for the Commission on the larger issue of whether to require all wireless carriers and interconnected text providers to deploy text-to-911 and how to address the timing, technical, and cost considerations of doing so.

Other Steps Toward NG911: The FCC Report to Congress

Beyond our work on text-to-911, we've been taking other actions to encourage the transition to NG911.

A few months ago, we provided to Congress recommendations that they requested from us on the necessary legal and regulatory framework to implement NG911.

Part of what we told Congress you already know: the 911 system has traditionally been managed at the state and local level, and the transition to NG911 must necessarily also happen at this level.

But the report's lead recommendation is for Congress to help advance this effort by encouraging states to become "early adopters" of NG911. We said that Congress should create mechanisms like challenge grants and other competitive funding programs to encourage states to compete to become early adopters. We suggested that Congress incentivize a "race to the top" to promote public safety implementation of NG911.

Here's why.

Early adopter states are the key to accelerating the overall NG911 transition. They try out new models and technologies, generating

valuable experience with NG911 implementation that other states can follow.

Their success not only makes people in their state safer, but will also make the transition easier and faster for all of the states who follow. And it builds sooner the necessary cadre of experienced PSAPs, service providers and vendors, who are ready sources of expertise and experience for those who implement next.

Across the country, 911 authorities are recognizing the advantage of moving now to implement NG911. Vermont, Tennessee, California, Counties of Southern Illinois, and Durham, North Carolina are but a few examples of places where PSAPs are upgrading their facilities to take advantage of the latest in IP networking.

We don't yet have critical mass, though.

We understand that there are several paths to follow to NG911.

To help you choose the right one, in early May, the Commission's Technology Transitions Task Force, which is studying the transition from TDM networks to IP-enabled networks, proposed to move forward with real-world NG911 trials.

The Commission believes that trials will provide us and PSAPs with additional data that will help in determining what policies are appropriate to spur investment and innovation while protecting consumers, promoting competition, and ensuring that emerging all-IP networks remain resilient. We welcome your input. Comments are due July 8 and replies August 7.

Throughout our consideration of all of the NG911 issues, I want to assure you that we are very aware that NG911 is about much more than new technology.

We know that transitioning to NG911 will present many operational challenges for PSAPs and that the transition period will be lengthier for some PSAPs than for others. We want to help you

overcome these challenges and shorten the transition time wherever possible.

Analytics and Data for PSAPs

One area that can contribute significantly to NG911 implementation is data analytics. Your PSAPs gather a tremendous amount of valuable information.

If you are not already extracting that information from your systems, then I recommend you talk to, say, California, about the ways that they are tracking real-time data from multiple PSAPs within the state.

Their systems pull information about 911 traffic directly from PSAPs and can deliver reports and analysis in real time to 911 authorities and PSAP managers. This helps PSAPs know when carriers are experiencing network issues and when overload events call for rerouting traffic to additional call stations. They know when a carrier is falling down on the job in delivering useful location information.

While many PSAPs collect internal data, compiling and sharing this knowledge with other PSAPs can make a huge impact in assessing 911 usage trends and in designing next-generation networks to respond to these trends. Data modeling would go far in helping all PSAPs, regardless of size, to enhance operability, ensure network resiliency, and plan for the transition to IP-based systems.

E911 Location Accuracy

Of course, one critical data point that can make an enormous difference is accurate location information. As you know from your daily work, a significant and increasing portion of wireless calls are made from indoor locations where today's location technologies provide poor or no information useful to call takers.

In many cases, you are relying on the caller to provide this critical information. For indoor calls, the right address is a good start, but first

responders must often be directed to the right floor and apartment or office.

The Commission has had a long-standing interest in improving indoor location accuracy, and the good news is that there have been recent positive developments in this area.

Last year, we tasked the "Communications Security, Reliability, and Interoperability Council" (CSRIC), an FCC technical advisory committee that includes NENA as a member, with establishing a test bed to study how a variety of location technologies perform in different types of in-building environments.

In March, the CSRIC presented the test bed results in a report to the Commission. The results are encouraging. They suggest that we may be able to make progress in this area, so we are now considering options for further action to improve indoor location information.

Call to Action

Before I close, I promised that I would challenge you. I posed a similar appeal to you when you came to Washington in March to meet with your Congressional representatives.

It is important to emphasize that none of the steps we are contemplating, whether related to text-to-911, facilitating the deployment of NG911 infrastructure, or sponsoring technology trials, require you and your PSAPs to implement these services and networks. That decision is properly left to states and PSAPs.

Some of you may have reservations about how much text-to-911 and NG911 will cost.

You may ask what impact it will have on your already stretched call takers.

Or how can you absorb these changes in an era of shrinking resources?

The FCC and most of the Federal government are operating under a very tight sequestration budget, so I certainly understand the challenges of operating and planning in an era of shrinking resources.

But let me suggest that PSAPs that are hesitating after asking how much will it cost and can we afford it, also need to ask another fundamental question: How can you afford not to move forward?

Real lives have been touched because text-to-911 was available to stop a domestic abuser or thwart a suicide attempt. Technology and applications continue to change how we communicate with each other.

IP-networking offers solutions for ensuring network resiliency and reliability. And consumer expectations are evolving as fast as technology – the public expects to be able to reach 911 using up-to-date communications tools, and will be increasingly confused and frustrated as their ability to communicate with 911 falls further behind the technological curve.

As for NG911, there are other questions to ask: One is: Have you had calls queued up during disasters that you couldn't answer fast enough to meet your standards?

And were you without a backup site with enough capacity to fully solve the problem?

If so, can you afford not to transition to NG911, where you will quickly and easily be able to re-route 911 calls to PSAPs which may not be physically close, but can help?

The ball is in your court. The consumer devices are in place. The major carriers are developing standards and deploying the network functionality. We are adopting the rules of the road.

Now is the time to step up and talk to those who have implemented text-to-911, like York County, Virginia and Durham, North Carolina.

Ask Frederick County, Maryland why they chose to implement text-to-911 now.

Talk to your colleagues in Vermont, Tennessee, and elsewhere that are building ESInets and moving forward with the migration to full Next Generation 911. They recognize that moving forward now is challenging but also opens up new opportunities.

So, again I challenge you to find a way to move forward now. Please do your best to make your states step up.

The Commission stands ready to help you in every way we can.

Conclusion

Let me close by emphasizing that we appreciate all that NENA and its members do every day to keep our citizens safe. We look forward to working with NENA and our other public safety partners in the years to come to enhance public safety. That's what you do so well, and we honor and support you.

Thank you again for inviting me here today.