

**STATEMENT OF
CHAIRMAN THOMAS E. WHEELER**

Re: *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114

One of the Commission's most important responsibilities is to preserve certain core values even as technology advances and the way that consumers use that technology evolves. Nowhere is that imperative more clear than in the arena of public safety.

Our E911 location accuracy rules were written when wireless phones were a secondary means of communication, and were mostly used outside. Today, more and more consumers use wireless phones as their primary means of communication, and more and more 911 calls are coming from wireless phones, from indoors.

The numbers make this trend very plain, but the stories really bring the issue home. Earlier this week, I met with folks from local PSAPs who told me their stories about why this is so important. They talked about how, during the Navy Yard shootings, people were calling 911 from inside the building – not using their office phones; using their mobile phones. Another story involved a person whose iPad had been stolen – the location information delivered to the PSAP was off by almost 3 miles, but the information provided using the iPad's location app provided pinpoint accuracy.

Our rules need to reflect the new realities of the always-connected mobile world. A lot of good work already has been done on this issue. In particular, through the CSRIC, FCC staff worked with wireless providers and technology vendors to establish a test bed to determine the state of location technology. What we learned has given us confidence that further advances in technology should enable us to locate callers indoors with the same degree of accuracy as outdoors. The Notice we adopt today builds on that experience by proposing an accuracy threshold for indoor locations that is just as effective as the threshold for outdoor locations, and an aggressive but reachable timeline for achieving that threshold.

Another important development is the ability to find a caller on the so-called "Z-axis" – that is, not just knowing what building the caller is in, but also what floor. This technology is relatively new, but it's already being installed in many handsets for commercial services. The proposals we adopt today seek to leverage that innovation to make sure that information is available to public safety.

Of course, as the saying goes, it takes two to tango. Providers will deliver the information, but it will mean little if PSAPs and state and local governments do not take the necessary steps on their part. This item asks important questions about what steps the FCC can take to encourage PSAPs to continue moving forward, but state and local governments must also step up to ensure that PSAPs have sufficient funding to deploy the necessary technologies and, ultimately, make the migration to NG911.

The item also proposes changes to our rules to address some of the challenges and issues raised by the data that was submitted to the FCC last year by the California chapter of the National Emergency Number Association.

Finally, this item also asks some very important questions about the opportunities new technologies enable in the longer term. Technologies that already exist and are already widely deployed should be able to provide granular location information. For example, can we leverage Wi-Fi or other small cell technologies to locate not just the building a caller is in, but the room? Today, for instance, stores in the mall know when you enter because they bounce a Wi-Fi signal off your mobile handset.

Our job is to ensure that as network providers and their customers upgrade to new technologies, there is no downgrade in reliability, availability, or public safety. Today's item takes the next steps to ensure that our rules continue to evolve along with technology and changing consumer habits.

Thank you to everyone in the Public Safety Bureau for their work on this item.

**STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN**

Re: *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114

Improving emergency response times has been a primary goal for 9-1-1 services, since 1967, when President Lyndon Johnson first encouraged the FCC to collaborate with the wire line industry in the development of a nation-wide emergency number. Consumers have made it clear that improving response times for 9-1-1 calls from wireless phones must also be a national priority. As today's item notes, the number of American households that are wireless only has grown from roughly 16 percent, in 2007, to 39 percent. And, for those living below the poverty line, that number has risen to 54 percent.

At our November 2013 workshop on location accuracy, we listened with unease about call centers in certain areas of the country not receiving the information they needed to dispatch help to those in need because mobile calls pose more challenges to first responders than wire line calls. Citizens understandably expect and believe that their mobile handsets – especially those smartphones with location based services – provide them with the same capacity to get help as their wire line phones. But all too often, this is simply not the case and the results can be heartbreaking.

Last month, at a Senate hearing on location accuracy, a witness testified that in Horry County, South Carolina, where you can find sixty miles of sun and fun, on and near Myrtle Beach, along with millions of other visitors each year, how 50% of their 9-1-1 callers cannot provide dispatchers with meaningful location information. And, with estimates as high as 80 percent of emergency calls being placed from cellular phones, it should come as no surprise that we have also been hearing pleas for location standards when wireless 9-1-1 calls are made from indoors. Location services must improve, as quickly as possible, and the Commission's response time to that end should also be swift.

We must ensure that our public safety obligations keep pace with consumer demand and technology shifts and I commend Chairman Wheeler for bringing forth a comprehensive Further Notice just three months after the November workshop. The item includes creative rule proposals and asks a wide range of technical questions designed to improve the timeliness and accuracy of all wireless location information. It also proposes, for the first time, location accuracy standards for wireless 9-1-1 calls from indoor locations. I am pleased that we seek comment on testing compliance with all of these standards and on requiring carriers to send location information within 30 seconds from the time the mobile consumer makes her 9-1-1 call.

Also noteworthy are the detailed questions about how developments in roaming, Wi-Fi, location based services and emerging technologies could impact the delivery of location information. We need to make sure our location accuracy standards account for future innovations in mobile services. The Further Notice also properly seeks comment on the abilities of PSAPs to access the location data that wireless providers send.

I understand some members of the wireless industry are bristling because the Commission is proposing to enhance the location accuracy rules at a pace that is seen as a bit aggressive. But today's item asks the wireless industry, the public safety entities, and others to work collaboratively toward developing alternative proposals for our consideration. And allow me to point out that one of the hallmarks of leadership in this industry is that it has, on many occasions, exceeded our expectations. We have already heard from those, who concur, that it is

time for the industry to adopt indoor location standards, and today, I wish to commend those entities. It would be great to see other examples of this kind of leadership, and for the wireless industry to actually move ahead of schedule, in implementing all the proposed location accuracy rules that our nation so desperately expects and needs.

I thank Admiral Simpson, and the dedicated staff, of the Public Safety Homeland Security Bureau, for their good work on this Further Notice, and for the presentation this morning.

**STATEMENT OF
COMMISSIONER JESSICA ROSENWORCEL**

Re: *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114

During my time at the Commission, I have made it a priority to visit public safety officials and talk about communications technologies where they work. So over the course of a year or so, I visited one 911 call center every month. That means I have seen public safety officials at work from Alaska to Arkansas, California to Colorado, Vermont to Virginia—and a whole lot of places in-between.

In every visit, I get the privilege of meeting emergency call operators and watching them work. They always amaze. Because when crises mount, they answer calls with steely calm and help ensure that help is on the way.

In every visit, I also hear one refrain: the number of wireless calls to 911 is skyrocketing. The data bear this out. Today, more than 70 percent of 911 calls are from wireless phones. That is more than 400,000 calls across the country every day. And this number is only going to grow. Today, for roughly 2 in 5 households, their wireless phone is their only phone. In some places, that number is even higher. In Idaho, for instance, more than half of all households no longer have a landline phone. In Mississippi, one half of adults live in wireless-only households. Closer to home, the numbers are similar right here for the District of Columbia.

The way we connect and call is changing. So is the way we reach out for help at our moment of greatest need. But our rules that provide first responders with information about where we are when we call 911 are stranded in calling practices of the last century.

So today, under our rules, if you call 911 from a wired phone, first responders know where you are and where to send help.

If you call 911 from a wireless phone outdoors, the Commission has standards that help ensure first responders can locate you and send assistance.

But if you call 911 from a wireless phone indoors, you should cross your fingers and hope and pray, because no location accuracy standards apply.

This is an unacceptable gap in our policies. But today we do something about it. On the heels of a hearing on this issue led by Senator Mark Pryor, we start a rulemaking to narrow this gap and fix this problem. He has been a champion on this issue and I thank him for it. To be sure, our proposals are aggressive. But I think we can fix this problem if all stakeholders work together. I am encouraged that carriers have told me they intend to work with public safety officials and the Commission to find technologies that work. For my part, I will be watching closely.

Finally, I want to note that this is important to me. I have traveled far and wide and witnessed this problem and I have spoken and written about it at length. So I am really pleased that the Chairman made it a priority to put it before the Commission and put it on the agenda today. I want to thank him for making public safety a priority. I look forward to working with my colleagues—and icons in the public safety community like Steve Souder—to improve our policies and make us all more safe. Because one thing is certain—when you call 911—you want first responders to find you.

**STATEMENT OF
COMMISSIONER AJIT PAI
APPROVING IN PART AND CONCURRING IN PART**

Re: *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114

It is one of the most elementary questions one can ask, yet it has been a challenging one for technology alone to answer: Where are you? The answer to this question is vital during an emergency. For this reason, there is tremendous value in transmitting accurate location data to emergency responders whenever someone dials 911. By knowing the location of someone in need, 911 dispatchers can send first responders immediately to the scene. Without it, police officers, firefighters, and emergency medical technicians may spend precious seconds, minutes, or even hours searching for a caller. And that is true whether a call is made indoors or outside.

I saw the promise of accurate indoor location technology for myself in the summer of 2012 inside a large Silicon Valley hotel. As I rode the elevator from floor to floor on that July afternoon, the prototype device tracked me fairly well. Had I needed to call 911, transmitting that information could have made all the difference.

I therefore support today's decision to commence a rulemaking proceeding to examine whether the Commission should adopt indoor location accuracy requirements. I also believe that we should enact rules in this area that are both aggressive *and* achievable. Unfortunately, I am skeptical that the timeframes proposed in today's item are realistic. As a result, I am voting to approve in part and concur in part.

Concerned about the feasibility of the timeframes proposed in this item, my office asked Commission staff and stakeholders for a step-by-step timeline that would show how it would be possible for a carrier to meet the timeframes contained in our proposed rules. But to date, no one has been able to produce such a timeline. It appears that today's proposal takes its inspiration from *Field of Dreams*: "If you build it, he will come." Only in this case, the mantra is: "If we mandate it, they will comply."

This is unfortunate. The Commission's rules should be more than aspirational. Our rulemaking process is not a feel-good exercise. It imposes legally binding obligations on regulated entities. It is unfair to saddle them with obligations that cannot be met. And such rules don't help the American people either. Indeed, they can be counterproductive since they stand a good chance of sparking litigation or paralyzing the industry with fear of taking any action if there is no clear path to compliance.

Americans recently have witnessed several instances where unrealistic mandates were imposed on businesses and had to be delayed. In order to prevent history from repeating itself, I would like to highlight two specific suggestions teed up in today's item for enabling carriers to comply with any location accuracy rules. *First*, the trigger for compliance should not be the effective date of the rules we ultimately adopt. Instead, the clock should start running when our Communications Security, Reliability and Interoperability Council (CSRIC) certifies that a technology vendor has demonstrated through an independently administered test bed program that a solution meets the horizontal and vertical location accuracy benchmarks set forth in those rules. To me, this is a matter of common sense. Carriers cannot begin to deploy a technology solution that does not yet exist. And the public should not be led to rely on a promise that cannot be kept.

Second, carriers should not be subject to enforcement action if they prove they are making their best efforts to deploy a technology that has been certified by CSRIC as complying with the Commission's location accuracy standards. Creating such a safe harbor would incentivize every vendor to partake in the CSRIC process. After all, the first to get CSRIC certification would have a leg up on competitors in getting its technology deployed in the field. This race to certification, in turn, would have the

serendipitous effect of getting an independently verified technology out in the field further and faster. This will save lives.

We also need to have this safety valve because we do not know how long it will take for carriers to deploy a compliant technology nationwide or whether a compliant technology will work in every single county in the United States. Deploying a compliant technology across the whole country will be a daunting and time-consuming task. Judging from our experience with Phase II, which the FCC mandated in 1996 but will not be fully implemented until 2019, I am skeptical that this deployment can be completed in two to three years.

The item indicates, for example, that CMRS carriers are increasingly turning to handset-based solutions for providing location information. But what would that entail here? First, the technology in question will need to go through the standards process. Second, device manufacturers will need to incorporate it into handsets. Third, consumers then will need to replace their old handsets with new ones. Experience with the deployment of AGPS-capable handsets has taught us that this is a cycle that will take many years to complete—and that's if everything goes smoothly. While I wish that we could click our heels together three times and watch the technology magically deploy itself on a nationwide basis, we're not in Oz (or Kansas, for that matter).

One other aspect of the proposed rules is worth mentioning. Today's item proposes that accurate location information must be transmitted to a Public Safety Answering Point within 30 seconds. At the same time, however, it also proposes to exclude from compliance determinations only calls lasting 10 seconds or less. So what is given with one hand would be taken away by the other. If a call lasts for twenty seconds, then a carrier will be penalized for failing to transmit accurate location information within those twenty seconds even though the rule ostensibly provides the carrier with thirty seconds to do so. This does not make sense. Whatever time period we end up choosing, whether it be 10 seconds, 20 seconds, or 30 seconds, we should have one consistent measure of how long carriers have to provide location accuracy information.

Finally, there's another critical aspect of the location accuracy problem worth thinking about. Last month, I began an inquiry into the state of 911 availability in establishments, such as hotels, motels, office buildings, and schools, that use multiline telephone systems (MLTS). Location accuracy matters with MLTS systems as well. A recent tragedy in Utah illustrates why.

On January 22, Randy Palmer suffered a heart attack while shopping at a Midvale, Utah auto parts store. An employee promptly called 911. But the call went to the wrong dispatch center because the store's phone system indicated that the call was being placed from the company's Salt Lake City office. First responders were consequently sent to the wrong location and took about 15 minutes to arrive in Midvale. Unfortunately, Mr. Palmer passed away. His widow put it well when she said: "People need to know what happened and I don't want something like this to happen to someone else. My husband was the most important person in my life [and] in my daughter's life. The [extra] minutes absolutely cost him his life." To me, the lesson is this: As we design indoor location accuracy requirements, we must not forget about MLTS location accuracy.

I would like to thank the staff of the Public Safety and Homeland Security Bureau for their hard work on these issues and my colleagues for agreeing to incorporate some of my suggestions into this item. I look forward to working together in the months to come to hasten the day when that vexing question—where are you?—becomes an academic one when it comes to emergency calling.

**STATEMENT OF
COMMISSIONER MICHAEL O'RIELLY
APPROVING IN PART AND CONCURRING IN PART**

Re: *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114

As more Americans rely exclusively on mobile phones, we must ensure that first responders can quickly and accurately locate wireless callers that dial 911 in an emergency. For this reason, I am supportive of issuing today's notice.

Going forward, however, we should avoid imposing location accuracy rules that are too far ahead of available technology. Aspirational goals are laudable, but they cannot be the basis for regulation. Any requirements that develop from this proceeding must be truly feasible as judged by experts operating in the field.

The deadlines we impose must also be realistic. I am concerned that the proposed timelines for implementing indoor location accuracy requirements do not meet this objective. Many steps are needed to deploy these new technologies. Vendors will have to test their technology and go through the standards setting process. Location systems will have to be built. Hardware will have to be added to handsets. New handsets will have to be introduced to consumers and achieve sufficient market penetration. This all takes time.

In fact, the record suggests that, after a system-wide deployment of new technology, it can take approximately four years for upgraded handsets to comprise 67 percent—and approximately five years to comprise 80 percent—of the total phones on a wireless provider's network.¹ We must ask whether it is possible, within two, three or even five years, for wireless providers to meet the proposed location accuracy requirements for 67 or 80 percent of all indoor calls to 911 when the necessary handsets may not even make up 67 or 80 percent of the total phones in the marketplace.

We learned these important lessons with the Phase II location accuracy rulemaking. There, the Commission established requirements and deadlines based on representations of emerging, as opposed to proven, technologies. It is fair to say that implementation did not go smoothly. A year after these rules were adopted, the Commission had to modify its benchmarks to "provide carriers with a reasonable prospect of meeting the [Phase II] accuracy and reliability requirements."² Despite this relief, the Commission still had to issue approximately 40 waivers, extensions or stays and a dozen enforcement actions.³

For these reasons, I regret that I must concur to the proposed deadlines in the notice. I look forward to engaging with stakeholders regarding timeframes in which it is feasible to meet the proposed indoor location accuracy requirements. One idea is basing the effective date of any rules on a successful demonstration, in a test bed, that there is technology available that meets the location accuracy

¹ Letter from Joseph P. Marx, Assistant Vice President, AT&T Services Inc., to Marlene H. Dortch, Secretary, FCC, Attachment, at 4 (Jan. 31, 2014).

² Letter from Brian M. Josef, CTIA-The Wireless Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, at 1 (Feb. 14, 2014) (citing *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Fourth Memorandum Opinion and Order, 15 FCC Rcd 17442 ¶ 23 (2000)).

³ *Id.* at 2.

requirements, but there may be others. We want to ensure that industry is capable of implementing any rules both timely and successfully so that this information is available for first responders.

Separately, I am pleased that the notice raises important questions about privacy. I hope the Commission will examine the privacy implications of advanced technologies and government access to consumers' location information. We need to be extremely careful with such data as technology evolves to better pinpoint a user's location for use in emergencies. We are entering a world where the Commission may require the ability to identify a person's location within 3 meters vertically—which is basically at floor level—and 50 meters horizontally. Law-abiding Americans should not have to worry about being tracked by law enforcement or other government entities in non-emergency circumstances.

Finally, I appreciate hearing from Steve Souder, the Director of the Department of Public Safety Communications for Fairfax County, Virginia and thank him for joining us here today. His perspective is helpful to our process and I applaud his service. I would, however, like to take this opportunity to echo the comments made by Chairman Wheeler at our last Open Meeting. Just as we look to require providers of technology to improve their public safety offerings, we need Public Safety Answering Points (PSAPs) to modernize their capabilities as well.

I thank the Chairman for including a number of my edits and the dedicated staff of the Public Safety and Homeland Security Bureau for all of their hard work on this notice. I also thank my colleague Commissioner Rosenworcel for her work on this issue.