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E–911 IMPLEMENTATION

HEARING

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

MARCH 5, 2003

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

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E–911 IMPLEMENTATION

WEDNESDAY, MARCH 5, 2003

U.S. SENATE,
SUBCOMMITTEE ON COMMUNICATIONS,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:30 a.m. in room SR–253, Russell Senate Office Building, Hon. Conrad Burns, Chairman of the Subcommittee, presiding.

OPENING STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

Senator BURNS. If we could call the Committee to order this morning, we have a couple of other special guests who are on their way, we hope, and if they show up, that is fine. We have a lot of witnesses today and I am going to forego my statement this morning, because it seems like the times are busy, but I want to welcome everyone to today's hearing on E–911 implementation. I am very pleased that the co-chairs of the E–911 Caucus were able to be here today. We are expecting the House Members any time, but my good friend from New York is here this morning, and we look forward to their testimony. I want to welcome also New York Assemblyman Koon, who will be introduced by the co-chair of the E–911 Caucus.

Assemblyman Koon lost his daughter in a terrible tragedy, but has transformed his immense grief into very positive action. I want to congratulate him on getting the E–911 funding through the New York State Assembly on the eve of the launch of the E–911 Caucus, and I cannot think of a more inspiring example of political and moral courage. I thank you for being here.

And this morning—well, we are joined by one House Member. Thank you for coming this morning, and just like I said, I will forego—but I happen to believe that probably E–911 was really a landmark piece of legislation, and now that we are embarking on the second phase of the implementation of that, of the words of that bill, it gives me great pleasure to introduce our good friends here today, because we want to emphasize this. We think it is important, in light of the times that we are in.

And so with that, I will introduce to the Committee here this morning Senator Clinton from New York, and I would ask you if you would have any statement at this time. Thank you for coming this morning.

STATEMENT OF HON. HILLARY RODHAM CLINTON, U.S. SENATOR FROM NEW YORK

Senator CLINTON. Thank you, Mr. Chairman, and thank you for your leadership, your constant and very effective leadership on this issue, and I am delighted that I am a part of this newly created E–911 caucus, along with Representatives Eshoo and Shimkus, and I thank you very much for your courtesy in extending an invitation to my friend, and an expert on this issue, Assemblyman David Koon from Rochester, New York, who you will hear from in a few minutes, and I also appreciate everyone appearing on the second panel, because they are the people who are going to make this happen for us.

I cannot overstate how important I think this issue is today with respect to emergency preparedness, and the first responders in our communities deserve the kind of support that is now available to them if we do our job correctly, because as you know so well, Mr. Chairman, when an emergency occurs, Americans put all their trust and faith in three numbers, 911, and many Americans purchase cell phones for that very reason. It can be a wireless call from someone in an accident, like the tragic case of the four young men out in a boat on Long Island Sound several weeks ago, who were trying to get help. It can be the type of tragedy that Assemblyman Koon has experienced and will describe to you in his own words.

In both of these cases, and in so many others around the country, people made that 911 call for help, but the person at the other end did not have the technology that would enable them to figure out where the call was coming from.

Now, especially in this post-September 11 world, our emergency response systems have got to be modernized. Communications technology changes almost overnight, and some of those technologies will be discussed in the later panel, but our State and local response centers have not caught up with this technological revolution. Hundreds of PSAP's in New York, the 911 centers where the calls come into, and across the country, still lack the resources, equipment, and technology to respond to 911 cell calls made by a cell phone, so we have to ask ourselves, what is the good of the FCC's mandates on wireless carriers to implement new tracking technologies if they keep getting extended because those on the receiving end cannot respond?

I am looking forward to working more closely with the FCC, and I am delighted that two of the Commissioners are here today. I think there are several key steps that need to be taken to enhance deployment of E–911 ubiquitously and quickly. First, wireless carriers and local telephone companies must be committed to this goal. We need them at the table, we need their guidance, we need to know what the obstacles are, and we need their ongoing commitment.

Second, with the technology available, we have to provide the resources and technical guidance to our PSAP's. This could mean Federal funding, but it certainly means holding States accountable for the dollars they are already collecting through 911 surcharges. As many of you know, in New York, tens of millions of dollars have been collected from 911 charges, but they have been diverted over

the last several years for reasons completely unrelated to 911 upgrades. When New Yorkers see the $1.20 charge on their phone bill for a 911 call, the highest surcharge in the country, they have reason to expect a quality of service that in many cases they are not receiving because the State is not sending these dollars back to the PSAP's, and Assemblyman Koon, from whom you will be hearing, has been working on this issue in New York, and has a very creative solution.

And finally, we do need a more active FCC on this issue. We in Congress must hear if the FCC needs greater authority to work with the carriers, to hold States accountable to coordinate E–911 deployment, and to guide PSAP's. The FCC reported just last month that nationwide wireless carriers have satisfied approximately 70 percent of all PSAP requests for Phase I.

Now, 70 percent is not a small number, but the fact is we have hundreds of PSAP's that have not even requested Phase I, so I think we have to look at what is the pool that the 70 percent is coming from, because we still have to encourage even more PSAP's to make that initial request, then we have got to go on to Phase II implementation.

And finally, Mr. Chairman, I would like to add that there is another issue that really has to be addressed almost simultaneously, and that is the communication and the interoperability capacity between different first responder agencies. We learned on September 11 many of our first responders could not communicate with each other, let alone across agencies. We absolutely cannot let that happen again.

So Mr. Chairman, I look forward to working with you under your leadership, along with our colleagues in the House. We are already at a point where somewhere between 30 and 50 percent of 911 calls originate from wireless phones. This number is only going to grow, and I cannot imagine a more pressing issue to address than the one that you have brought to our attention, and I thank you, Mr. Chairman.

Senator BURNS. Well, we thank the Senator from New York, and her energy that she is putting into this effort, and we welcome you and look for good work coming from you.

On the House side, we have also our co-chairs of the 911 Caucus, and it is truly an honor to have them here today, John Shimkus, United States Representative, and we look forward to hearing your testimony.

Mr. SHIMKUS. Thank you, Mr. Chairman. If I may, I would defer to my colleague, Anna Eshoo. She is senior to me and has been very helpful on this, and if you do not mind, I would like to be the gallant gentleman.

Senator BURNS. I might add, she is more attractive, too.

[Laughter.]

STATEMENT OF HON. ANNA G. ESHOO,
U.S. REPRESENTATIVE FROM CALIFORNIA

Ms. ESHOO. Well, I thank the gentleman, and good morning to you, Mr. Chairman. Thank you for holding this hearing and having me participate in it, and for your very steady leadership on this issue, and focusing attention on it. I have worked on this issue

since 1996 and introduced legislation in the House with my colleague, John Shimkus, in 1999 to make 911 the universal emergency number for both wireline and wireless devices.

I would like to draw specific attention to that time line. It has been 7 years since we first directed the attention of the Federal Government to this issue, so it is disappointing that so much time has passed and we still do not have widespread deployment of E–911, because there are terrible consequences without having the coordinated system.

In 1998, the House Energy and Commerce Committee, which I am a member of, held a hearing on E–911, and one of the things we emphasized was the need for PSAP's to upgrade their equipment. That was 5 years ago, and PSAP readiness is still something that demands our attention.

Similarly, in 1998 we were shocked by stories similar to the most recent tragedy involving the teenage boaters in New York. I think we have been talking for a long time about this, and I think that it is about time that we bring this life-saving technology to bear across our country.

At last week's press conference announcing the E–911 Caucus, Chip Yarborough traveled across the country from California. He is the head of E–911 in Mountain View, California. He expects that in about 6 months, Santa Clara County, which is the home of Silicon Valley, will become the first county in California with an operational E–911 network. I think that that is great news, but keep in mind there are 57 other counties in California.

With the formation of our caucus, I think that we can provide very important leadership in addressing the obstacles that are slowing deployment across our country. Let me just focus my remarks on a few of them.

First, there is a need for a coordination of effort. There are so many pieces which must fit together to make a seamless E–911 network a reality. After a good deal of Congressional pressure, I believe that the FCC and the wireless carriers have demonstrated a commitment to deploy E–911 technologies as soon as possible and not tolerate further delays, and the Congress is essential in this, because we have to ensure that there is the appropriate oversight so that there is not any more slippage on the deployment schedule, but we also need to make sure that manufacturers, technology providers, public safety officials, and local exchange carriers are on the same page, and if the groups do not work together, I fear that we will only encounter more delays or, worse still, will fail to reach a caller in need.

I also want to say that I think people across the country think that when they dial 911, E–911, whether it is a landline or a wireless line, they believe that they will be taken care of, so we need to live up to the expectation that they already have.

There is a hidden danger in a lack of qualified staff at dispatch centers. They play an integral role in making sure the location information is communicated properly to emergency personnel. To have qualified staff, we have to provide appropriate training, and to prevent turnover, they must be adequately compensated. This is one more burden for States that already find themselves in dire financial straits.

Finally, I think it is extremely important to take a big-picture view of E–911 as we work to expedite its deployment. By that, I mean taking a look at the role it plays in our homeland as well as our hometown security. Does it make sense to put E–911 oversight within the Department of Homeland Security? I think we should be examining that.

How do other mandates impact deployment? If we require number portability across communication devices, whether they are wireless or wireline devices, could that create technological impediments to effective E–911 service? With regard to dead zones in coverage, if we are to eliminate them, we have to look at the issues of spectrum efficiency and building of more cell sites.

I pose these questions understanding the complexities they raise, but also with the expectation that we can resolve them with the determined efforts of everyone in the E–911 Caucus and in our Congress.

Finally, I would like to acknowledge the very important role that Assemblyman David Koon from New York is playing in this. His innovative idea of using State cell phone surcharges to leverage a $300 million bond to speed E–911 deployment may very well serve as a model for other States, and I really applaud his commitment to this issue.

So Mr. Chairman, thank you again for your leadership. To my colleagues who are the co-chairs of this caucus, I think that we can really be the Energizer bunnies of this, and for the good of our Nation. E–911 had an appeal and an importance to it before 9/11, but in this post-September 11 era, I believe that since we have the technology, we have to have the political will to coordinate and to give people what they need. I think that we can do it, and I look forward to working with each one of you to accomplish it.

Thank you very, very much.

Senator BURNS. Thank you, Ms. Eshoo, and we sure appreciate your remarks.

John Shimkus, who shares the duties with you over on the House side on the caucus.

STATEMENT OF HON. JOHN SHIMKUS, U.S. REPRESENTATIVE FROM ILLINOIS

Mr. SHIMKUS. Thank you, Chairman Burns, members of the Subcommittee. It is an honor to be here this morning to testify on the issue of the 911 deployment. I want to thank the chairman for his leadership on this issue. Not only are you the principal author of the Wireless Communication and Public Safety Act of 1991, but you also, along with Senator Clinton, initiated the formation of the Congressional E–911 Caucus this year. I am proud to be a co-chair of this caucus on the House side, with my colleague, Congresswoman Anna Eshoo.

Not long ago, all 911 calls were local calls made on wireline phones. Today, it is estimated that nearly 130 million wireless phones are in use, generating an average of 150,000 calls to 911 each day. However, few people realize that most wireless 911 calls do not go to the nearest public safety answering point, or PSAP, do not provide the caller's callback number, nor do they provide the caller's location. In some areas, wireless callers get an automated

voice instead of help when they dial 911. With more and more Americans relying on wireless phones for safety, especially in the aftermath of September 11, it is important that we focus on implementing this safety technology as soon as possible.

The goal of E–911 is simple: to make wireless Enhanced-911 services universally available throughout the United States. However, implementing E–911 is proving to be anything but simple. In fact, sluggish deployment was so troubling that the FCC launched an inquiry into technical and operational reasons for the delays. The resulting Hatfield report was released in October 2002, and I encourage everyone to read that report. I found it very informative. I would like to reiterate some of the important points made in this authoritative report, along with my own observations.

When something goes wrong with a wireless 911 call, the wireless industry gets the blame. That is not always appropriate, since wireless is only one part of the extremely complex E–911 system. Often compared to a kaleidoscope, wireless E–911 involves an interrelation of numerous parties, including the carriers, both wireless and wireline, public safety answering points, equipment providers, and State and local governments. Right now, wireless carriers have invested hundreds of millions of dollars toward E–911, and are generally able to provide location information on wireless calls throughout the country, but fewer than 30 percent of PSAP's are currently able to process that information.

One weakness in the link that the Hatfield report highlights is a lack of alignment with the PSAP's. Amazingly, no one knows exactly how many PSAP's there are in the country today. Many States, including my own State of Illinois, do not have an official record of the number of locations of all of their PSAP's. This may be in large part due to the adaptations the call centers must make to meet changing community needs, and I read an article on the plane, a clipping from a local paper, and it talked about my home county of Madison County.

Madison County has 16 emergency call centers scattered throughout the area. However, due to recent budgetary pressures, community leaders are in the process of consolidating these call centers for efficiency and better service. I suspect that this type of thing will be going on across the country, as economic realities, combined with increased demand for 911 services, force States and localities to make tough decisions. As these changes occur, it is important that we keep track of the PSAP's so that no one is left behind.

Illinois has 102 counties, St. Clair being the first in the Nation to roll out E–911 to deploy. Bond County just went up on E–911, but there are many counties, as I stated before, that are just in Phase I, or just trying to pass referendums as we speak, so there is not, as we talked about last week, a ubiquitous system across the country.

Another weakness Hatfield points to is a little-known fact that the incumbent local exchange carriers are critical conduits for E–911. However, their responsibilities toward enabling E–911 have not been well-defined. Further, Hatfield notes that their systems are antiquated, and must be upgraded to handle the necessary digital transmissions. We need to focus more attention on this impor-

tant aspect of our communications infrastructure, and also work to ensure that we are enacting policies that promote investment in facilities-based networks.

In addition to guarding against adverse policies toward wireline infrastructure, we also need to be protective of the wireless infrastructure. I am sure you will hear many times this morning some States are taxing wireless phone customers in the name of E–911, and then turning around and using those funds to meet budgetary shortfalls. This needs to stop. Illinois has a good record, but they have tremendous budget pressures, so they may—hopefully they do not go to the dark side and start doing that, but the Hatfield report points out that many State legislators have levied surcharges that failed to adopt E–911 cost recovery methods for the emergency call centers, and this is holding back PSAP readiness.

Another issue that many State public utility customers are demanding is the immediate implementation of wireless number portability. I agree with their view that this is an important goal, and one that should be achieved. However, it is also a very expensive and technically complicated goal. It would be wise at this time to set a priority of safety before convenience. We should encourage the wireless industry to first complete their E–911 mandate and build out their networks for better coverage before we force them to spend money on something that is a mere amenity to customers, such as number portability, and, of course, this goes to the whole debate, certainty versus uncertainty, to be able to gain capital you need a certain environment.

Under the current regulations, there are many disconnects in the E–911 implementation process. The Hatfield report speaks over and over of the need to coordinate on many levels in order to make E–911 readily available. All parties appear ready and willing to implement E–911, but no one is directing this national effort to remedy this.

Hatfield proposes the creation of a national 911 program office within the Department of Homeland Security. I think we need to take a closer look at this issue of coordination, and, if necessary, pass legislation to close the gap on directing this effort successfully.

Once again, I thank the Committee for holding this hearing, and hope that we can continue to work together to make Enhanced-911 a reality for all Americans, and thank you, Mr. Chairman.

Senator BURNS. Thank you, Congressman, and now it is a great deal of pleasure to introduce Mr. Koon this morning. He spawned an idea during our announcement that sort of fascinated us, and I think it needs further exploration, because I had not thought of it. I wish I had. But nonetheless, we think it has merit, and I am glad that your Senator from New York invited you to come back this morning and share your views on that, and we welcome you this morning. He is an Assemblyman, Hon. David Koon of New York State, and thank you very much for coming this morning.

STATEMENT OF HON. DAVID KOON, NEW YORK STATE ASSEMBLYMAN

Mr. KOON. Thank you, Mr. Chairman. Good morning. My name is David Koon, and I represent the Eastern portion of Monroe County in Western New York, in the New York State Assembly. I

truly appreciate this opportunity to testify here this morning before the Subcommittee on Communications. I would like to begin by thanking the FCC and Congress for taking the initiative to encourage development and deployment of wireless Enhanced-911. Both the FCC and Congress recognized early that this was an important public safety issue, and I am grateful for the hard work and leadership shown during this evolving process of improving and implementing wireless E–911.

The issue of wireless E–911 service has a deep personal meaning for me. In 1993, our daughter was abducted and murdered in Rochester, New York. We had installed a wireless telephone in her car in the event of an emergency so that Jennifer could call 911 for help. Somehow, Jennie managed to dial 911 for help from her car phone, even though she was in the car with her abductor. However, the 911 dispatcher was unable to locate her. The dispatcher listened helplessly to the last 20 minutes of Jennie's life. It is this personal family tragedy that prompted my involvement in public service to help make New York a safer place.

I am deeply grateful to have the opportunity to share my story with this committee, and hope that the implementation of E–911 technology in every State will make it possible to determine the location of a person making a wireless 911 call. It has been recognized in New York State that there is a problem with the funding of our public safety answering points, or PSAP's. The State collects a monthly wireless 911 surcharge that could be used for upgrading of the locator technology. However, New York State and many other States are not using this surcharge to provide funding for the PSAP's.

This country faces a difficult public safety problem, because the reality of the wireless 911 is that each State is different in the advancement of cellular technology to locate a 911 caller. With the guidance and leadership of Speaker Sheldon Silver, Assemblymembers Robert Sweeney, Roann Destito, and Thomas DiNapoli, and many other of my colleagues in the New York State Assembly, I have recently introduced a new piece of legislation that will change how New York State funds the deployment of wireless E–911 technology. A copy of this bill, A–3911, which passed the assembly on February 24, 2003, is attached to my written testimony for your reference.

After many attempts to fund a successful E–911 program in the State of New York, I think that we have finally found a solution modeled after Virginia's successful program. This legislation creates a wireless 911 local initiative funding enhancement, or LIFE program, in order to provide localities with funding to expedite the development of enhanced wireless 911 service. Wireless 911 LIFE will encourage the development of enhanced wireless 911 services by providing funding to local wireless emergency dispatch centers, or PSAP's.

In order to be eligible, local PSAP's would have to submit a written plan, including a financial plan and implementation timetables, to the State 911 board for approval. Upon approval, local PSAP's would be eligible for funding related to equipment, software, and hardware necessary to provide the Enhanced-911 service. Bonds will be issued by the Dormitory Authority to fund the cost associ-

ated with the program. The debt service on these bonds would be paid from the existing New York State wireless 911 surcharge. This program will give vital technology dollars to the municipalities now, and avoid the postponement of this important safety issue any further.

My current legislation is an extension of legislation passed in 2002 that enacted a local enhanced wireless 911 program. This program provided $20 million from the existing cellular surcharge to help localities fund costs associated with the provision of enhanced wireless 911 service. $10 million in funding was made available to reimburse eligible wireless 911 service costs, which include installation and maintenance of equipment, hardware, and software designed to meet the FCC enhanced wireless guidelines. Further, $10 million in funding was made available to purchase additional equipment. This program is administered by a 13-member board organized within the Department of State.

The 2002 legislation reimburses localities for incurred expenses. This current legislation will allow localities to receive funds prospectively, ensuring quicker success to access technology. As I mentioned before, this legislation was modeled after a program in Virginia that provides funding to PSAP's in a similar manner, and has found that it greatly expedited the availability of the wireless E–911 service. At present, Virginia has well over 50 percent of the State in compliance with the Phase I requirements, and expects to fully comply with the Phase II requirements in the immediate future. Every State should demand the same technology.

It is important to remember that successful implementation of wireless E–911 Nationwide requires the cooperation of all parties involved; local, State, and Federal Governments, local law enforcement agencies, carriers, and manufacturers. It is also important for the public to be better informed and educated about the process. These hearings are an important step toward both increasing participation of the public in this process and getting input from different organizations.

Again, thank you for this great opportunity to speak before this Committee, and I look forward to answering any questions you may have.

[The prepared statement of Mr. Koon follows:]

PREPARED STATEMENT OF HON. DAVID KOON, NEW YORK STATE ASSEMBLYMAN

Good morning. My name is David Koon and I represent the eastern portion of Monroe County in Western New York in the New York State Assembly. I truly appreciate the opportunity to testify here this morning before the Subcommittee on Communications. I would like to begin by thanking the FCC and Congress for taking the initiative to encourage development and deployment of wireless Enhanced 911. Both the FCC and Congress recognized early that this was an important public safety issue and I am grateful for the hard work and leadership shown during this evolving process of improving and implementing wireless E–911.

The issue of wireless E–911 service has deep personal meaning for me. In 1993, our daughter was abducted and murdered in Rochester, New York. We had installed a wireless telephone in her car in the event of an emergency so that Jennifer could call 911 for help. Somehow Jennie managed to dial 911 for help from her car phone, however, the 911 dispatcher was unable to locate her. The dispatcher listened helplessly to the last twenty minutes of Jennie's life. It is this personal family tragedy that prompted my involvement in public service—to help make New York a safer place. I am deeply grateful to have the opportunity to share my story with this Committee in the hope that the implementation of E–911 technology in EVERY state

will make it possible to determine the location of a person making a wireless 911 call.

It has been recognized in New York State that there is a problem with the funding of our Public Safety Answering Points (PSAPs). The state collects a monthly wireless 911 surcharge that could be used for the upgrading of the locator technology. However, New York State and many other states are not using this surcharge to provide funding for the PSAPs. This country faces a difficult public safety problem because the reality of wireless E–911 is that each state is different in the advancement of the cellular technology to locate a 911 caller.

With the guidance and leadership of Speaker Sheldon Silver, Assemblymembers Robert Sweeney, Roann Destito, and Thomas DiNapoli and many other of my colleagues in the New York State Assembly, I have recently introduced a new piece of legislation that will change how New York State funds the deployment of wireless E–911 technology. A copy of this bill (A. 3911), which passed the Assembly on February 24, 2003, is attached to my written testimony for your reference.

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It is important to remember that successful implementation of wireless E–911 nationwide requires the cooperation of all parties involved—local, state, and federal governments, law enforcement agencies, carriers, and manufacturers. It is also important for the public to be better informed and educated about the process. These hearings are an important step towards both increasing participation of the public in this process and getting input from different organizations. Again, thank you for the opportunity to speak before this Committee and I look forward to answering any questions that you may have.

STATE OF NEW YORK

3911

2003-2004 Regular Sessions

IN ASSEMBLY

February 10, 2003

Introduced by M. of A. KOON, SWEENEY, DESTITO, SILVER, TOKASZ, FARRELL, DiNAPOLI, BRODSKY, MORELLE, KAUFMAN -- Multi-Sponsored by -- M. of A. AUBERTINE, BING, BRADLEY, CAHILL, CARROZZA, COLTON, CUSICK, EDDINGTON, ENGLEBRIGHT, GALEF, GLICK, GRANNIS, HIGGINS, JOHN, KARBEN, LAFAYETTE, LAVELLE, LIFTON, MAGNARELLI, McENENY, O'DONNELL, PHEFFER, RAMOS, SEDDIO, SIDIKMAN, SMITH, TOWNS, WRIGHT -- read once and referred to the Committee on Local Governments

AN ACT to amend the county law and the public authorities law, in relation to the creation of the wireless 911 LIFE program

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Legislative intent. The legislature hereby finds and declares that:

Since 1991, New York state has imposed a monthly surcharge on wireless telephone bills to finance the implementation of an emergency telephone system for wireless telephone users.

A 2002 audit conducted by the office of the state comptroller estimated that almost 200 million dollars in revenues had been collected.

In 1996, the Federal Communications Commission (FCC) issued an order requiring wireless carriers to deploy wireless enhanced 911 service.

Despite the revenue collections, New York state has not yet implemented a wireless enhanced 911 system.

The lack of implementation of this lifesaving system with the ability to determine the location and identity of wireless callers harms New Yorkers and requires prompt action.

§ 2. Section 325 of the county law is amended by adding a new subdivision 17 to read as follows:

17. "Expedited deployment funding" means eligible wireless 911 costs estimated to be incurred by local public safety answering points for enhanced wireless 911 service.

EXPLANATION--Matter in *italics* (underscored) is new; matter in brackets [-] is old law to be omitted.

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§ 3. The county law is amended by adding a new section 333 to read as follows:

§ 333. Wireless 911 local incentive funding enhancement (LIFE) program. 1. Authorization. In addition to the powers authorized in section three hundred twenty-eight of this article, the New York state 911 board shall adopt standards governing reasonable eligible wireless 911 service costs for expedited deployment of enhanced wireless 911 service, repayment provisions, and the criteria for approval of priority enhanced wireless 911 plans for expedited deployment funding. Standards for expedited deployment funding shall consider whether the projected costs are reasonably necessary for the provision of enhanced wireless 911 service and whether the priority enhanced wireless plan conforms to the FCC order.

Only local public safety answering points designated and operated by a governmental entity, other than the state police, shall be eligible for expedited deployment funding. To apply for funding, such local public safety answering points shall submit a written enhanced wireless 911 plan.

An enhanced wireless 911 plan shall include the following information and such other information as may be required pursuant to standards adopted by the board:

(a) a timeframe for planned enhanced wireless 911 implementation;

(b) a list of all wireless service suppliers licensed to provide service in the county;

(c) a financial plan, including vouchers of projected costs related to equipment purchase, installation and approved maintenance necessary to provide enhanced wireless 911 service;

(d) a description of technologies to be used to provide enhanced wireless 911 service;

(e) documentation supporting the local public safety answering point's ability to receive and utilize enhanced wireless 911 information within the next one hundred eighty days; and

(f) a resolution from the governmental entity supporting the local public safety answering point's request for expedited deployment funding.

2. The board shall have ninety days to review and approve such local public safety answering point's plan. The plan for expedited deployment funding shall be determined by the board to be complete or incomplete within ninety days of receipt of the plan. If the board does not issue a determination of completeness or incompleteness within ninety days of receipt of the plan, the plan shall be deemed approved. Upon approval of the local public safety answering point's plan, the board shall submit recommendations to the New York state dormitory authority pursuant to the provisions of section sixteen hundred eighty-nine-h of the public authorities law for the payment of expedited deployment funding.

3. Following distribution of expedited deployment funds, the local public safety answering points shall submit receipts to accompany the approved vouchers demonstrating that such expenditures have been incurred. Any local public safety answering point which utilizes expedited deployment funding for purposes other than those authorized by the board shall be provided with written notice by the board of such unauthorized expenditures. Upon receipt of the notice, the local public safety answering point shall cease making any expenditure involving expedited deployment funding. The local public safety answering point may petition and shall receive a hearing before the board within a reasonable time. At the board's discretion, the local public safety

answering point shall be required to refund within thirty days any expedited deployment funding spent on unauthorized expenditures. Local public safety answering points who fail to cease making unauthorized expenditures or fail to comply with a request to refund expedited deployment funding shall be subject to a suspension of future funding by the board.

4. (a) The board shall make recommendations to the dormitory authority pursuant to section sixteen hundred eighty-nine-h of the public authorities law on a monthly basis regarding all funding requests. The authority shall make final determinations with respect to such recommendations not later than the end of the following month.

(b) The authority shall distribute monies from the fund to the local public safety answering point for the payment of eligible wireless 911 service costs pursuant to this section and in accordance with the provisions of section sixteen hundred eighty-nine-h of the public authorities law.

(c) A local public safety answering point whose plan has been denied or who has been denied funding by the authority may appeal such denial to the board.

§ 4. The public authorities law is amended by adding a new section 1689-h to read as follows:

§ 1689-h. Wireless 911 local incentive fund enhancement (LIFE) program. The authority is hereby authorized to finance eligible costs associated with the wireless 911 LIFE program in accordance with the provisions of section three hundred thirty-three of the county law. 1. a. Notwithstanding the provisions of any general or special law to the contrary, and subject to appropriations by the legislature, in order to assist the authority in the financing and refinancing of such eligible costs, the director of the budget is authorized to enter into one or more service contracts, none of which shall exceed thirty years in duration, with the authority, upon such terms as the director of the budget and the authority agree;

b. Any service contract entered into pursuant to paragraph a of this subdivision or any payments made or to be made thereunder may be assigned and pledged by the authority as security for its bonds, notes, or other obligations;

c. Any such service contract shall provide that the obligation of the director of the budget or of the state to fund or to pay the amounts therein provided for shall not constitute a debt of the state within the meaning of any constitutional or statutory provision in the event the authority assigns or pledges the service contract payments as security for its bonds, notes, or other obligations and shall be deemed executory only to the extent moneys are available and that no liability shall be incurred by the state beyond the moneys available for the purpose, and that such obligation is subject to annual appropriation by the legislature;

d. Any service contract or contracts entered into pursuant to this subdivision shall provide for state commitments to provide annually to the authority a sum or sums, upon such terms and conditions as shall be deemed appropriate by the director of the budget, to fund the principal, interest, or other related expenses required for any such bonds, notes, or other obligations.

2. The authority shall, from any appropriations made available for this purpose, establish a wireless 911 local incentive funding enhancement (LIFE) program that shall offer expedited deployments funding grants pursuant to section three hundred thirty-three of the county law.

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1 Financing for such grants authorized pursuant to this section shall only
2 be made upon the determination by the authority, in consultation with
3 and upon recommendation of the 911 board, that such grants will result
4 in the expedited deployment of enhanced wireless 911 service.
5 3. To obtain funds for the purposes of this subdivision, the authority
6 is hereby authorized to issue bonds or notes in an amount not to exceed
7 three hundred million dollars excluding bonds issued to fund one or more
8 debt service reserve funds, to pay costs of issuance of such bonds, and
9 bonds or notes issued to refund or otherwise repay such bonds or notes
10 previously issued, for payment of the costs of the wireless 911 LIFE
11 program in accordance with the provisions of section three hundred thir-
12 ty-three of the county law.
13 4. In computing for the purposes of this subdivision, the aggregate
14 amount of indebtedness evidenced by bonds and notes of the authority
15 issued pursuant to this subdivision, there shall be excluded the amount
16 of such indebtedness represented by such bonds or notes issued to refund
17 or otherwise repay bonds or notes, provided that the amount so excluded
18 under this paragraph may exceed the principal amount of such bonds or
19 notes that were issued to refund or otherwise repay only if the present
20 value of the aggregate debt service on the refunding or repayment bonds
21 or notes shall not have at the time of their issuance exceeded the pres-
22 ent value of the aggregate debt service of the bonds or notes they were
23 issued to refund or repay, such present value in each case being calcu-
24 lated by using the effective interest rate of the refunding or repayment
25 bonds or notes, which shall be that rate arrived at by doubling the
26 semi-annual interest rate (compounded semi-annually) necessary to
27 discount the debt service payments on the refunding or repayment bonds
28 or notes from the payment date thereof to the date of issue of the
29 refunding or repayment bonds or notes and to the price bid therefor, or
30 to the proceeds received by the authority from the sale thereof, in each
31 case including estimated accrued interest.
32 § 5. Subdivision 5 of section 309 of the county law is amended by
33 adding a new paragraph (g) to read as follows:
34 (g) To provide the costs of debt service for bonds and notes issued to
35 finance the wireless 911 LIFE program annually pursuant to the
36 provisions of section three hundred thirty-three of this chapter and
37 section sixteen hundred eighty-nine-h of the public authorities law.
38 § 6. This act shall take effect immediately.

Senator BURNS. We thank you, Assemblyman Koon, and shucks, I thought that was an original idea, and you brought Virginia up, but no, I think most of our States—you know, we get to thinking we are going to build something internally, and we are afraid to look outside our States, and New York has done that, and under your leadership, and we appreciate that very much.

I do not have any other questions. I wanted your testimony as a part of this record, because as we move into Phase II and we look at other things—you all mentioned interoperability in our communications centers. Tomorrow will be a hearing on spectrum, and we are dealing with the spectrum renovation, you might say, because we do not handle our spectrum in this country very well. We do not manage it to its highest efficiency, and we know there are a lot of areas that have to be coordinated, understanding the need for public safety and also military, and, of course, the demand on the commercial sector for more spectrum is every day increasing, so as we move this piece—this interest along on E–911, we also have to look at the tools that we have in front of us, and are we using them as effectively and as efficiently as we possibly can.

I have been joined by Senator Boxer of California and Senator Snowe of Maine, and of course the Senator from Maine has some

of the same challenges that we have in Montana. We have great spaces, and the ability to locate people who are in an emergency situation is very, very important.

I have no questions of this panel, and I know every one of you here is busy. It is a busy time of the year, and I would excuse them, but do the two Senators have any questions for this panel?

OPENING STATEMENT OF HON. OLYMPIA J. SNOWE, U.S. SENATOR FROM MAINE

Senator SNOWE. Thank you, Mr. Chairman. I want to thank you for highlighting this most significant issue in terms of personal safety and national safety, and I want to thank our panelists, Senator Clinton, Congresswoman Eshoo, Congressman Shimkus, and Assemblyman Koon, and I thank you for being here and sharing with us the personal tragedy that your family has endured as a result of this lapse. The only thing we can do is to make something positive come out of this situation. We thank you for being here today.

I think it is obvious that we need to do something, and the Hatfield report had indicated that there are not any champions within the Federal Government, but I see that we have a number of champions, and we thank you for creating the caucus. We want to take the next best step to beginning to provide this kind of service in the States, and standardize this service nationwide, and have the kind of cooperation at all levels of Government to make sure that this can happen, so the kind of tragedy that occurred with your family, Mr. Koon, and your daughter, never occurs again, so I thank all of you for bringing the attention that you have here today.

Thank you, Mr. Chairman.

[The prepared statement of Senator Snowe follows:]

PREPARED STATEMENT OF HON. OLYMPIA J. SNOWE, U.S. SENATOR FROM MAINE

Thank you, Mr. Chairman, for holding this hearing today. I am very grateful for your leadership in drawing attention to this most important issue.

The bottom line is, people all across America rely on 911 in an emergency. They expect it to be there when they need it. The very term "911" is used as an adjective to describe something that responds to a crisis. And enhanced 911 or E–911 services can enhance our ability to save lives, protect property, and contribute to a more secure America.

The capability of wireless location detection is an important component of homeland security and will provide our first responders with more accurate information. According to the Cellular Telecommunications & Internet Association, at least one-third of all 911 calls are now made on cell phones. It is for this reason that we need to deploy E–911 services as quickly as possible all across America in *both* rural and urban settings, and that we understand the unique needs in each of these areas.

We in Congress recognized the extreme importance of wireless enhanced 911 services several years ago. I was disappointed when the October 2001 deadline for implementation of this vital service came and went without seeing this goal realized—however, I understand that technology changes and other factors have complicated this matter more than initially anticipated.

Indeed, I am concerned by the relatively distant deadline for completion of Phase II that will allow automatic location identification by all wireless carriers. The issues of adequately funding Public Safety Answering Points (PSAPs) and the training of personnel at PSAPs also must be addressed in more detail. I look forward to learning more about these issues and what role this Subcommittee, the Commerce Committee, and Congress as a whole can play in ensuring the expedited and successful deployment of fully functional Enhanced 911 services for wireless subscribers.

Thank you Mr. Chairman.

Senator BURNS. Senator Boxer.

STATEMENT OF HON. BARBARA BOXER, U.S. SENATOR FROM CALIFORNIA

Senator BOXER. Mr. Chairman, thank you for your leadership on this, and to the panel, we are very grateful. I wanted to say also to the assemblyman, taking your tragedy and turning it into action to stop these things from happening, it is so commendable and so important, because you will be focused like a laser beam until this gets done in your State, and as Anna and I know in our State, a State that has so many natural disasters, from earthquakes, fires, floods, droughts, everything that happens to us, we need to make this happen.

I have one question, because I have been trying to grapple just—I have been driving my staff crazy. What is actually stopping this from happening? I mean, my understanding is, the technology is there to have this location technology on the phones. If anyone on the panel could give me some guidance on what is the biggest problem stopping this from happening, since the technology is there—if you say money, I want to know that, and if you have any idea of how much it would take us to do this.

Mr. SHIMKUS. Well, I will go first. I know the other panelists that you will have, Mr. Chairman, will address this. There are three main players. There are the PSAP's, the local call centers, there are the local exchanges, which are the local phone companies and the wireline, and then there are the cellular companies, and based upon the meetings we had last week, they are all at different stages, and they all will take capital investment. Those local call centers get a tax. Some States take some of that money away and use it for other things, where it should be devoted to movement to the technological solution.

Again, in my county—St. Clair County, Illinois, which is just south of my county, is the first county that went E–911 location identification by cellular, but there are still some counties in the 102 counties in Illinois that have not even gone to Phase I, which is wireline 911, which takes a local referendum, so that is why we need, as Senator Snowe said we need champions—the Hatfield report said champions—so that we can push the disparate elements, and they are all stakeholders and they all want to get there, but sometimes the cellular company will be prepared to go, but the wireline is not ready, or the wireline and the cellular is ready, but the PSAP is not prepared, and so that is why we have got to continue to push forward, and I will defer to my colleagues.

Ms. ESHOO. I think Congressman Shimkus has outlined, given you a very good snapshot of what exists. In California, in 6 months, Santa Clara County will be the first county to be coordinated, and launch its E–911, but as I said in my testimony, we have 57 other counties, so I think that what Assemblyman Koon has identified makes a great deal of sense for us to take a look at, and that is, you have to have the money behind this as well, and with the pressure on States relative to their budgets, he really has presented,

I think, a model for us to take a look at, but there is a great deal of coordination that needs to take place.

It can be done. I mean, when you look at each part of it, it is moving, and the will in our local communities to implement this is very, very strong. It is a matter of pulling it together and making sure that the resources that are collected, and we are taking a look at what California collects and where it is going, that we have to turn that one around.

Senator CLINTON. Senator, I would add only one other factor, because both Congressman Shimkus and Congresswoman Eshoo have really summarized what the problems are, but the lack of certainty that has beset the telecom industry and much of our new technology over the last several years I think has played a role in slowing this down, and to some extent deterring action.

There are some splits in the kind of technology that would be best to use. If you go one way, does that mean you cannot go another way? So that is why we need the FCC's help to really set forth some very clear guidance and to try—insofar as we can from a regulatory perspective create some certainty, and it may be that we have to make some decisions that will help local communities decide what direction is the way to go, not just next year, but for the foreseeable future, decades from now.

We need a system that is seamless, interconnected, crosses county and State borders, and provides interoperability among various first responder agencies. I think it would be tragic if, at the end of this process, even if we keep it going and get everybody focused, we have different technologies, different systems that cannot talk to each other and cannot really come together in the time of a national emergency, so there is a lot of need to get some certainty in this, which I would add to the mix of everything that has been said.

Mr. KOON. I would just like to add, in New York State I can tell you that the PSAP's that are working to get Enhanced-911 are doing it on their own. They have not received one penny from the State of New York, even though the State of New York has collected a 70-cent surcharge on Enhanced-911 since 1991. We will approach well over $300 million that has been collected in the State of New York, and not one penny has been sent to the local PSAP's. That is the problem.

The other problem, of course, is the coordination of getting, because every PSAP in New York that is working on it may be working on different technology, because the State has not taken the leadership to say to the PSAP's this is the technology we want to go with, this is how we are going to do it, and here is the money to do it with. That is what it is going to take.

Senator BOXER. Thank you, Mr. Chairman. Thank you so much. It just seems to me that when money is taken for another purpose, there is something very immoral about that really, even if it might have been taken for another great cause, but taxpayers are paying for a purpose, it seems to me. I am not a litigious person, but it seems like a taxpayer lawsuit might be appropriate there, when you have money sitting for a specific purpose, and it is in the law, and it is taken for another use.

Of course, I should not—we do that around here all too often.

[Laughter.]

Senator BURNS. I was going to say——

Senator BOXER. So I have to be careful, but I do not like that when we do that, either. But anyway, I just want to thank the panel and you, Mr. Chairman. Thank you very much.

Senator BURNS. Thank you, Senator. I was going to say, he who has no sin, cast the first stone.

Senator BOXER. You have got to be careful around here.

Senator BURNS. We are going to excuse this panel, and again we want to thank you very much. Also, I want to add to this, there has been an explosion in E–911 calls coming from cells. I left a report at each of the Committee members' desk, or place, how there are 57 million 911 calls called from cell phones just this last year, so we have got that explosion out there, and the increased use of cell phones as primary communication devices has also exacerbated this thing as far as the switches and the local carriers and the service providers, so we have got a problem out there, and it is not easy, there is no easy answer.

So I want to thank this panel very much, and you are excused, and I know you are awfully busy, but thank you for coming today.

Senator CLINTON. Thank you, Mr. Chairman.

Ms. ESHOO. Thank you, Mr. Chairman.

Senator BURNS. Our next panel is Hon. Kathleen Abernathy, who is a Commissioner of the Federal Communications Commission, and Hon. Jonathan Adelstein, also from the Federal Communications Commission, and we welcome them here today and appreciate their testimony, and maybe we can get some answers from the FCC, if we could have order, and we look forward to their testimony.

I would ask Ms. Abernathy if you would offer your remarks at this time.

STATEMENT OF HON. KATHLEEN Q. ABERNATHY, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Ms. ABERNATHY. Good morning, Chairman Burns and distinguished members of the Subcommittee. I appreciate the opportunity to appear before you on behalf of the Federal Communications Commission to discuss our progress——

Senator BURNS. Could the Commissioner suspend just for a second? Could somebody catch the door there and close that door, if they could? Thank you. You always do good work, Scott.

Please.

Ms. ABERNATHY. Thank you. I do want to discuss our progress in speeding the deployment of Enhanced-911 wireless services throughout the United States, and I fully agree with Senator Clinton, Representative Shimkus, Representative Eshoo, and Assemblyman Koon that nationwide deployment of E–911 is a critical public safety matter, and we will step up to our responsibilities, as requested by Senator Clinton.

Today, I am going to focus on three points surrounding the implementation of E–911, first, the importance of this technology to our citizens, second, the FCC's current enforcement efforts, and third, the FCC's most recent outreach initiative.

As pointed out by Senator Clinton and Representatives Eshoo and Shimkus, E–911 can be and should be an effective public safety tool. For example, boaters who have lost their way in fog have been pinpointed and rescued, police have been able to locate crime scenes even in situations where caller information is extremely limited, and drivers whose cars have rolled off the roads have been found, thanks to location capabilities, but this capability is not yet available nationwide, and one life lost is one too many, as we know from the testimony of Assemblyman Koon.

Because of the widespread use of mobile phones by American consumers, and because of the potential to enhance consumer safety and security, the FCC has taken the lead to ensure that nationwide E–911 capabilities become a reality, and I remember when the FCC first initiated its proceeding on E–911 location in the mid–1990's, and many were skeptical, and you might ask why. Well, there was no commercial demand at that time, there was no statutory mandate, and no technology available.

There was also uncertainly regarding timing and cost, but fortunately, the leadership at the FCC at that time forged ahead with this important public safety initiative, despite the numerous obstacles. Over time, we have learned a great deal about the nature of E–911 and how to overcome unanticipated barriers to deployment. For example, when the Commission found out that handset-based solutions would allow increased accuracy—like these kind—we modified our rules to allow carriers to select either a network solution or a handset-based approach, and the handset-based approach is now being widely deployed, with impressive results.

We have also come to appreciate the technological and operational complexity associated with E–911 deployment. As pointed out by Representative Eshoo, multiple Federal, State, and local jurisdictions are involved in this roll-out effort, and for example, to ensure an accurate location, first the wireless carriers must implement either a handset or a network-based E–911 system, then the incumbent local exchange carriers must provide appropriate trunks and update their automatic location identification databases, and last, the local public safety community, the PSAP's, must be able to process that location data that is transmitted from the wireless carriers to the other phone companies, and at every stage of this pipeline, there are funding and operational issues that can arise.

Despite these hurdles, Phase II has been deployed in approximately 125 markets across the country to more than 300 PSAP's in 16 States, including Houston, Dallas-Forth Worth, Chicago, East St. Louis, and the State of Rhode Island. Additionally, with respect to location-capable handsets, there are numerous choices available on the market today at very reasonable prices, but we must do more. As deployment continues, we must remain vigilant about ensuring that E–911 service is delivered as promised. If a carrier fails to meet its deployment obligations, the FCC will not hesitate to use its enforcement power. This is consistent with one of my key regulatory principles. The FCC must have clear rules, and then we must enforce those rules.

Although my first choice is always for the carriers to use their resources to deploy E–911 services, when they fail to comply with their individual roll-out plans, the Commission must take action.

So in several instances, the FCC has negotiated consent decrees with wireless carriers, requiring contributions to the Treasury, and we have imposed deployment benchmarks and reporting obligations to ensure ongoing compliance, but perhaps more importantly, we are looking at new ways to help speed deployment and ensure the smooth implementation of E–911 across the country.

To this end, the FCC has held a variety of proceedings on E–911 implementation, and we also commissioned a report by independent expert Dale Hatfield. We specifically asked him to examine the technical and the operational issues affecting E–911 implementation.

As the Hatfield report recognized, delivering on the E–911 promise is a highly complex process that requires an enormous amount of coordination among numerous stakeholders. You have the FCC, the wireless carriers, the PSAP's, Congress, State and local governments, location technology vendors, the LEC's, and 911 service providers, and this coordination effort is an essential component in the Commission's implementation plan for E–911.

But what is most important to us is, our citizens do not really care how they are located. They do not care who takes the call, or how it is routed, or what data is used to transmit the information. They simply want to know that help will arrive as soon as possible, and the FCC is committed to doing everything in our power to ensure that the various stakeholders work in harmony to make this happen. Therefore, Commissioner Adelstein and I are pleased to announce the launch of the FCC's E–911 Coordination Initiative, with the first meeting scheduled for April 29, 2003. This initiative will help ensure that everyone has a clear understanding about the roles and responsibilities of the parties involved, and it will provide a framework for working out unexpected problems that may delay deployment, and an opportunity to share best practices, and I believe this effort should be directly responsible to some of the concerns that were expressed by Senator Clinton, Congresswoman Eshoo, and Congressman Shimkus.

In addition, the initiative will build on the can-do spirit of many of the participants in the E–911 Caucus, including leaders such as John Melcher from NENA, and Thera Bradshaw of APCO, who are here today to testify.

In closing, I want to thank you, Senator Burns, and this subcommittee for your leadership in this very important area, and for the opportunity to provide information on the implementation of wireless E–911, and I appreciate Congress' efforts and, in particular, the efforts of this subcommittee and the E–911 Caucus to keep attention focused on this critical issue, and I look forward to working with all of you to advance our common goal of improved safety and security for all wireless customers.

Thank you very much.

[The joint prepared statement of Ms. Abernathy and Mr. Adelstein follows:]

JOINT PREPARED STATEMENT OF HON. KATHLEEN Q. ABERNATHY AND HON. JONATHAN S. ADELSTEIN, COMMISSIONERS, FEDERAL COMMUNICATIONS COMMISSION

Good morning, Mr. Chairman and distinguished members of the Subcommittee. We appreciate this opportunity to appear before you this morning on behalf of the

Federal Communications Commission (FCC) to discuss the Commission's work in support of the deployment of Enhanced 911 (E–911) wireless services throughout the United States. This hearing is an important opportunity to focus a spotlight on a critical public safety matter, and we commend Chairman Burns and the other members of the Congressional E–911 Caucus for their leadership in this area.

I. Introduction

Since the tragic events of September 11, 2001, and during these uncertain times, we are reminded now more than ever of the importance of our Nation's emergency response system and the public's reliance on dialing 911 to reach first responders in times of crisis. Increasingly, 911 calls are being made from wireless phones. Public Safety Answering Points (PSAPs) report that they receive 30 to 50 percent of emergency calls from wireless phones.

An important goal of the FCC is to ensure that each American who uses a wireless phone has enhanced 911 capabilities. This is made more challenging by the fact that wireless phones are mobile. Mobility creates technological challenges related to automatic location identification when dialing 911—a crucial element in responding to emergency situations.

The FCC's E–911 regulatory regime is a government-led effort to mandate the development and deployment of wireless 911 automatic location identification technology prior to commercial demand for that product. Indeed, the FCC's initial decision in 1996 to impose an E–911 requirement on mobile wireless carriers was not based on any statutory mandate, nor was it based on any tangible technological showing. Subsequently, in 1999, Congress passed S. 800, the Wireless Communications and Public Safety Act of 1999, which was championed by Chairman Burns, among others. This legislation mandated 911 as the universal number for emergency calls and furthered E–911 implementation by addressing key issues such as privacy and carrier liability.

The deployment has been a tremendous undertaking full of uncertainty about the technology, the timing, and the costs for all parties involved. The Commission set an ambitious roll out schedule for the deployment of wireless E–911. In hindsight, wireless carriers and their vendors may not have fully appreciated the difficulties in deploying such a new, but important, technology. All parties have been frustrated by unforeseen obstacles, but continue to work through the issues to ensure successful deployment of a nationwide E–911 system.

As part of our commitment to the deployment of Enhanced 911 nationwide, the FCC has worked very hard over the past 18 months to clarify the rules and schedules governing the deployment and implementation of E–911 services. We are pleased to report that many of the wireless carriers have followed suit. Moreover, several technological solutions to identify a wireless 911 caller's location are now available, with more anticipated in the future.

Now that the E–911 rules and policies have been clearly established, our focus has rightly turned to ensuring prompt wireless E–911 implementation. Implementation is an extremely complex process, and the Commission has taken firm steps to ensure that wireless carriers assume their responsibility in ensuring that the deployment of wireless E–911 is not unnecessarily delayed. Enforcement actions have been initiated, million dollar fines have been issued, and consent decrees now are in place.

To speed full implementation, greater coordination is necessary among all stakeholders—the FCC, wireless carriers, PSAPs, location technology vendors, incumbent local exchange carriers (ILECs), local and state governments, equipment manufacturers, and 911 service providers. And the FCC will do its part. We are pleased to announce that the FCC will launch an E–911 Coordination Initiative to complement current efforts by those parties to speed and rationalize the E–911 deployment process, and to ensure that all parties and the public have clear expectations about the roles of the respective parties and deployment plans. The Coordination Initiative will be launched with a joint session of all the affected parties and the public at the Commission on April 29, 2003. In particular, the event will follow up on the findings and recommendations of the Commission's Hatfield Report on E–911 deployment. We look forward to a full dialog on these issues that will spur efficient and effective E–911 deployment.

Not all aspects of E–911 deployment are within the Commission's control, however. For example, financial support and assistance from state and local authorities to provide funding to the PSAPs for their part in this important initiative is also imperative. We know that members of Congress and particularly members of this Subcommittee share the Commission's goal that the entire Nation will have access to wireless E–911 services as soon as practicable. We are pleased that Congress is continuing its active role in the roll out of wireless E–911 through efforts such as

the bipartisan Congressional E–911 Caucus, co-sponsored by Senators Burns and Clinton and Representatives Shimkus and Eshoo. We look forward to working with you on achieving the goal of a nationwide E–911 system.

II. Background

The FCC and Congress have been working toward E–911 deployment for almost a decade. In 1996, based in large part on a consensus agreement developed by the wireless carrier and public safety communities, the FCC established two phases of E–911 deployment. Phase I requires carriers to deploy a service that provides the telephone number of the 911 caller and the location of the cell site or base station receiving the 911 call. Phase II service requires wireless carriers to provide precise location information for wireless E–911. Because of technological challenges associated with Phase II deployment, the FCC has allowed nationwide wireless carriers to commit to individual compliance plans. In some cases, wireless carriers have violated the terms of their compliance plans, and these violations have led to enforcement actions.

III. Wireless E–911 Deployment Today

The deployment of E–911, because of technological and other challenges, was never intended to be a flash-cut process, but a gradual phase-in over several years. It is estimated that there are between 5,000 and 7,000 PSAPs across the Nation. Despite these challenges, wireless E–911 is becoming a reality. Deployment of Phase I service is well under way. Of the Phase I requests received from PSAPs, five of the six nationwide carriers reported that they have fulfilled approximately 70 percent or more of these requests, and two wireless carriers, AT&T Wireless and Verizon Wireless, report that they have each fulfilled over 90 percent of Phase I requests received.

The precise rollout of Phase II service, like that of Phase I, depends in large part on when the PSAP makes a request to the wireless carrier for Phase II service. PSAPs must have the ability to upgrade their systems to receive location information and have cost-recovery mechanisms in place before a wireless carrier must implement Phase II pursuant to a PSAP request. Unfortunately, because of budget cuts, many jurisdictions do not have the required funding to upgrade their PSAPs so that they are technologically ready to support Phase II implementation.

When wireless carriers implement Phase II services, they may select either a handset-based or network-based solution. Wireless carriers that use network-based solutions must deploy Phase II to 50 percent of the PSAP's coverage area within six months of a valid request, and to 100 percent of the PSAP's coverage area within 18 months of a request, unless the parties agree upon a different schedule. Wireless carriers choosing a handset-based solution must complete any necessary upgrades to their systems within six months of a PSAP request. Additionally, the rules provide for specific benchmark dates by which these carriers must begin to sell and activate a certain percentage of handsets that provide location information. By December 31, 2005, these carriers must ensure that 95 percent of their customers' handsets are location-capable.

The 2005 date is popularly referred to as the final implementation date of Phase II wireless E–911. However, it is important to note that the December 31, 2005 date primarily requires carriers choosing a handset-based Phase II solution to ensure that at least 95 percent of their subscribers have location-capable handsets. As the Commission does not have jurisdiction over PSAPs, there is no corresponding requirement that PSAPs actually be able to receive Phase II data at that time. Also, those carriers who have selected a network-based solution will continue to deploy Phase II within six months of a valid PSAP request. With regard to the 2005 date for carriers with handset-based technologies, the Commission has held firm to this implementation date for location-capable handset deployment. We recognize that a continuing set of delays could seriously hinder E–911 deployment and therefore could reduce safety-of-life services for all Americans.

According to the most recent reports submitted to the FCC by the nationwide wireless carriers, Phase II has been deployed in approximately 125 localities across the country, to more than 300 PSAPs in 16 states. Multiple wireless carriers are providing Phase II service to their customers in metropolitan areas such as Houston, Dallas/Fort Worth, Chicago, East St. Louis, as well as Rhode Island. At least one wireless carrier has deployed Phase II service in cities such as Kansas City, Miami, Richmond, San Antonio, and Indianapolis.

Additionally, with respect to location-capable handsets, every nationwide carrier using a handset-based approach is offering at least one location-capable handset model, in accordance with applicable benchmarks. Both Sprint PCS and Verizon Wireless have reported that they are offering their customers at least ten different

GPS-enabled handset models. Sprint reported that it has sold over 5.8 million GPS-enabled handsets.

IV. FCC Actions To Promote Continued E–911 Deployment

To further promote the successful implementation and deployment of nationwide E–911, the FCC has engaged in four major areas of activity: (1) enforcement, (2) implementation, (3) investigation of technical and operational challenges, and (4) outreach and coordination. As discussed below, all four areas are essential to ensure that E–911 deployment moves forward as swiftly and effectively as possible.

A. Enforcing FCC Directives

The Commission requires carriers to comply with our E–911 rules, and during the past year we have not hesitated to use our enforcement power when wireless carriers are not justified in failing to meet the FCC's requirements. In cases where the public interest warrants, we have provided additional flexibility in situations where delayed compliance is beyond the wireless carrier's control.

When the FCC last reported to Congress on the status of E–911, we indicated that individual compliance plans for the nationwide carriers were in place. Since that time, the Commission has taken the following actions where carriers have failed to comply with these plans:

- Entered into consent decrees with AT&T Wireless (June 2002) and Cingular Wireless (May 2002) regarding deployment of E–911 over their Time-Division Multiple Access (TDMA) Networks, notwithstanding the fact that both carriers plan to phase out much of their TDMA networks as they transition to the Global System for Mobile Communications (GSM) standard. These consent decrees require AT&T Wireless and Cingular Wireless each to make a $100,000 voluntary contribution to the U.S. Treasury, to deploy E–911 Phase II technology at their TDMA cell sites, and to provide Phase II service in response to PSAP requests by specified benchmark dates. The consent decrees also require the carriers to make automatic penalty payments for failure to comply with deployment benchmarks and to submit periodic reports on the status of their compliance efforts.
- After issuing a Notice of Apparent Liability against AT&T Wireless for apparent E–911 violations concerning its GSM network, the Commission and AT&T Wireless entered into a consent decree in October 2002 to address these apparent violations. This decree requires AT&T Wireless to make a $2 million voluntary contribution to the U.S. Treasury, to deploy E–911 Phase II technology at its GSM cell sites and provide Phase II service in response to PSAP requests by specified benchmark dates. The consent decree also requires AT&T to make automatic penalty payments for failure to comply with deployment benchmarks and to submit periodic reports on the status of its compliance efforts.
- Recently, the Enforcement Bureau initiated an investigation into Cingular Wireless's and T-Mobile's deployment of E–911 with respect to their GSM networks and will make a recommendation to the FCC shortly on how to proceed.

The Commission continues to monitor each carrier's progress in deploying Phase I and Phase II E–911 and to investigate alleged failures to meet FCC-mandated benchmarks. Where warranted, the FCC will continue to take quick action to ensure that wireless carriers comply with the FCC's E–911 rules and regulations.

It is worth noting that the three wireless carriers deploying GSM networks have experienced difficulties in meeting their benchmarks due to technology problems. The Commission has repeatedly met with these carriers to emphasize the seriousness of the existing benchmarks. All three carriers were referred to the FCC's Enforcement Bureau. Within the past six months, two of those carriers have announced their decision to switch location technologies to ensure improved performance of their E–911 systems.

Finally, on a separate enforcement front, in December 2002, in response to allegations made in lawsuits filed by the Wireless Consumers Alliance, the Commission's Enforcement Bureau initiated an investigation against ten equipment manufacturers regarding possible violations of the 911 call processing rule with respect to certain handset models. The Enforcement Bureau sent letters to the manufacturers requesting information as to whether a total of 33 handset models are in compliance with the 911 call processing rule. The Bureau is reviewing the responses and preparing follow-up letters to some of the manufacturers and working with the FCC's Office of Engineering and Technology on possible field and lab testing protocols to ensure the manufacturers are in compliance with our rules.

The 911 call processing rule requires that all mobile phones manufactured after February 13, 2000, and capable of operation in an analog mode, incorporate one or

more of the special procedures for processing 911 calls endorsed or approved by the Commission. Such procedure must recognize when a 911 call is made and must override any programming in the mobile phone that determines the handling of a non-911 call in order to permit the 911 call to be handled by an analog carrier other than the user's preferred analog carrier.

B. Moving Towards Full Implementation

Although significant progress is being made, we still have a long way to go before wireless E–911 is deployed across the Nation. In addition to actively enforcing its existing rules, the FCC is also looking at new ways to help speed and smooth implementation of E–911 across the country. To this end, over the past year, the FCC has made a number of E–911-related rulings, including:

- Setting a deployment schedule for smaller, non-nationwide carriers to begin to provide E–911 service. Specifically, under this schedule, mid-sized carriers were required to begin deployment on March 1, 2003 and small carriers will begin deployment later this year. Like the nationwide carriers, mid-sized carriers must report regularly on their E–911 deployment progress, and smaller carriers must provide a report outlining their plans for E–911 deployment.
- Clarifying PSAP readiness issues and providing for a certification process for wireless carriers where wireless carriers have completed all necessary steps toward E–911 implementation that are not dependent on PSAP readiness.
- Issuing guidance on cost recovery issues regarding the demarcation point between PSAPs and carriers.
- Issuing a Further Notice of Proposed Rulemaking seeking public comment on how the 911 and E–911 rules should apply to technologies not currently covered by the rules, such as Mobile Satellite Service, telematics services, and emerging voice services and devices; and seeking updated information on issues involved with the delivery of callback and location information on 911 calls from stations served by Multi-Line Telephone Systems, such as PBXs. This item provides an early forum for the possible extension of our 911 and E–911 rules.

In other instances, the Commission directly responded to concerns raised by several of the national public safety organizations regarding the unnecessary diversion of PSAP resources to respond to unintentional or harassing 911 calls from wireless phones. In October 2002 and pursuant to a specific public safety request, the Commission issued a public notice clarifying that its 911 call-forwarding rule does not preclude wireless carriers from blocking fraudulent 911 calls from non-service initialized (NSI) phones pursuant to state and local laws. The public notice highlighted the waste of public safety resources that results from fraudulent 911 calls made from NSI handsets, which lack a call back number. The Commission continues to look at the issue of NSI wireless phones through an ongoing proceeding.

In December 2002 the Commission released a Staff Report on unintentional wireless 911 calls, which occur when a consumer accidentally dials 911, often through use of a preprogrammed auto-dial key. The report confirmed that unintentional wireless 911 calls pose a significant problem for PSAPs, and outlined steps that industry participants can and should take to address the problem. For example, the major wireless carriers have requested that their vendors cease shipping phones with an active, auto-dial 911 feature. In nearly all cases, wireless phones distributed by these carriers have not had an auto-dial 911 feature since at least February of 2002. In addition, the Cellular Telecommunications and Internet Association (CTIA) has modified its handset certification program such that certified handsets may not be preprogrammed with an auto-dial 911 feature.

The FCC has also received a commissioned report of an independent expert, Dale Hatfield, which examined the technical and operational issues affecting wireless E–911 implementation. Mr. Hatfield, a widely respected telecommunications expert with nearly four decades of experience, met with interested parties to elicit more detailed information regarding E–911 deployment issues. In October 2002, he released a report to the Commission containing his findings and recommendations. The Commission sought public comment on the Hatfield report late last year, and the Commission is actively considering Mr. Hatfield's recommendations.

In his report, Mr. Hatfield made a number of findings identifying obstacles to E–911 deployment, which include:

- Wireless carrier implementation issues;
- ILEC cost recovery and technical issues;
- Cost recovery and PSAP funding issues;
- Ongoing need for PSAP education, assistance, and outreach; and
- Lack of comprehensive stakeholder coordination.

While the FCC had already become aware of many of the issues raised in the Hatfield report and was working on potential solutions, the Hatfield report suggested many novel approaches, which the FCC is actively studying and, in some cases, implementing.

C. Overcoming Technical and Operational Challenges

The Hatfield report confirmed that ILECs play a critical role in the deployment of wireless E–911 service. ILECs generally serve as 911 system operators, providing trunks, facilities, and services necessary to connect wireless carriers and PSAPs. For Phase II, they also provide the Automatic Location Identification (ALI) databases that are used for wireline 911 and must be upgraded to accommodate wireless ALI data. The FCC has sought cooperation from the ILECs to fulfill their E–911 implementation role. In response to concerns from both the PSAP and wireless communities, late last summer, the FCC requested additional information from the six major ILECs regarding their role in E–911 deployment, including specific information on technical issues and cost recovery plans.

Additionally, Commission staff has been working with state commissions, wireless carriers, PSAPs, and ILECs regarding specific cost issues that have been brought to our attention. In one instance, the Commission staff issued a letter regarding a dispute over responsibility for the costs to upgrade ALI databases for purposes of deploying wireless E–911 Phase II service. We fully intend to take action where appropriate to ensure that actual wireless E–911 deployment is not delayed because of perceived regulatory disputes. In an Order released last fall, the Commission similarly expressed concern over the potential threat to timely wireless deployment due to a lack of cooperation by the ILECs and noted that it would consider instituting enforcement actions or imposing additional regulatory obligations on ILECs, if necessary.

The Hatfield report also confirmed that there continue to be E–911 implementation issues outside of the Commission's purview. Specifically, we note that PSAP funding continues to be a significant barrier to deployment. Although cost recovery mechanisms are in place in a number of states, these funds have on occasion been diverted for other uses unrelated to E–911. If PSAPs do not have funds in place to upgrade their systems, Phase II service will not be implemented in those areas. We know that this issue already has been raised by the Congressional E–911 Caucus, and we applaud your efforts to resolve this critical issue.

D. Coordination and Outreach

Wireless E–911 implementation is a highly complex process that requires an enormous amount of coordination. Both coordination and outreach are essential components in the Commission's ongoing effort to facilitate E–911 implementation. We look forward to working with the Chairman and our fellow Commissioners on our E–911 Coordination Initiative. We believe that the upcoming April 29 meeting will complement the national public safety organizations' leadership efforts and result in substantial progress for all parties.

The Commission's Wireless Telecommunications Bureau (WTB) and Consumer and Governmental Affairs Bureau (CGB) have provided ongoing outreach to consumers, public safety, and state legislators on E–911 issues. In addition to speaking at numerous conferences, the Bureaus have served to educate PSAPs, state legislators, and the public on 911 and E–911 issues. With respect to educating the public, CGB most recently established a Consumer Alert on unintentional 911 calls and WTB has established a web page for 911 and E–911 issues, which include Fact Sheets on the wireless E–911 requirements generally and the nationwide carriers' obligations to deploy E–911 pursuant to their approved compliance plans. We will continue these efforts and begin other outreach efforts to ensure that E–911 implementation is as efficient as possible.

The Commission staff also has been monitoring the E–911 coordination efforts of other organizations to enhance stakeholder coordination. We applaud the joint efforts of industry and public safety to focus on E–911 deployment and coordination of stakeholders. For example, public safety outreach efforts such as the National Emergency Numbering Association's Strategic Wireless Action Teams Initiative and the Association of Public-Safety Communications Officials' Project Locate have been instrumental in working with local PSAPs to ensure PSAPs are aware of their responsibilities and to assist with on-the-ground implementation efforts. Additionally, the joint industry and public safety group, Emergency Services Interconnection Forum (ESIF), an arm of the Alliance for Telecommunications Industry Solutions, has worked to develop and refine technical and operational interconnection issues to ensure wireless 911 will be available to everyone.

Last month, ESIF submitted to the Commission a PSAP Readiness Package, which was developed through the joint efforts of wireless carriers, 911 service system providers, and public safety organizations. This serves as a useful tool for PSAPs that are unfamiliar with the E–911 request process. The Department of Transportation has also established a Wireless E–911 Initiative, which includes efforts to bring national leadership and attention to the E–911 issue, to provide technical assistance and guidance and training to accelerate PSAP readiness, and to engage the Nation's leading information technology experts in a reexamination of the technological approach to E–911.

V. Conclusion

Wireless communications have become increasingly important to our national communications infrastructure and our everyday lives. That significance is further validated by the fact that the United States is the only nation in the world that has required that wireless telephones are E–911 capable to assist the public safety community in performing their vital work. All the stakeholders who have worked on this process—Congress, the public safety community, wireless carriers, ILECs, state and local governments, equipment vendors, technology vendors, and the Commission—should be proud of this accomplishment. However, these very same stakeholders must continue to be diligent in completing the availability of Nationwide E–911 in the near future.

The Commission continues to make wireless E–911 deployment one of its highest priorities. We have come a long way, and through some difficult times, but we are optimistic about the future of wireless E–911. We appreciate Congress's efforts, and in particular, the efforts of members of this Subcommittee, to keep this issue in the forefront.

We would like to thank the Subcommittee for this opportunity to provide information on wireless E–911. We look forward to hearing your views and answering any questions you may have.

Senator BURNS. Thank you, and thank you for your testimony. Commissioner Adelstein, thank you for coming today.

STATEMENT OF HON. JONATHAN S. ADELSTEIN, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Mr. ADELSTEIN. Thank you, Mr. Chairman, for inviting me to testify. Senator Nelson and Senator Boxer, good morning. I am honored to join my friend and colleague, Commissioner Abernathy, in reporting on the FCC's role in promoting the deployment of E–911 services. I am thrilled that so many members of the public safety community are here with us this morning as well. They are on the front lines every day, and they deserve our thanks and our support.

Mr. Chairman, I commend you and Senator Clinton and Representatives Shimkus and Eshoo for your leadership and vision in establishing the E–911 Caucus. It was nice to join you last week at the roll-out of that initiative, and I think that is really a necessary continuation of leadership that you and Senator Hollings and this committee have shown and demonstrated on this issue, foremost by enacting the 911 legislation back in 1999.

Mr. Chairman, you have been at this a long time, and you have really kept pressing us forward. I remember at my confirmation hearing you asked me about this very issue. I told you then that, in my Jewish tradition, the Talmud says if you save one life, you save a whole world. When people look back on your career and those of the people on this committee, I think they will recognize that you have saved a lot of worlds. You will have helped so many people that otherwise would have suffered perhaps death or disability, or horrible harm, to be located more quickly by emergency personnel.

As far as I am concerned, as a Commissioner at the FCC there is no higher calling or higher priority for us at the FCC than wireless E–911. Every day, we confront issues that affect billions of dollars, and sometimes you read about them on the front pages. However, I do not think there is anything more critical than this issue, because it is a matter of life and death.

I want to share a story from the pre-E–911 days from my home State of South Dakota. You might have heard about a woman named Karen Nelson, whose car got stuck in the snow along a country road in a huge snowstorm. Fortunately, she had a cell phone, but this was back in 1997, before the days of E–911, and she did not know where she was. But she heard a search plane flying overhead, and when the noise got louder she told the dispatcher, "it is getting closer, it is getting closer", and as it got further away and the noise got fainter, she said, "it is getting further away." Eventually she provided enough information that after several passes, she was rescued, and that was only after spending 40 hours in her car in the dead of winter, so thank God she was saved. This is truly a primitive but innovative use of location technology.

Now we have really got to make wireless E–911 happen everywhere. We have come a long way since then, but we still have a long way to go. I think the deployment had a fitful start. It was based on a new and unproven technology, as Commissioner Abernathy indicated, and required unprecedented cooperation from a wide range of players. Commissioner Abernathy mentioned some of the players that are involved, and it is worth repeating, because it is incredible how complex it is to get those involved coordinated.

There are wireless carriers, public safety answering points, equipment and technology vendors, local exchange carriers, State utility commissions and local governments, and the FCC. Now we have the Department of Homeland Security and the Department of Transportation involved and, of course, Congress showing leadership the whole way.

Looking back, though, I think that many of us agree that the ball was dropped on occasion as we moved down the line on this; but I really think, if you look at the numbers in the recent reports, that things are turning a corner. In the last year, the FCC cracked down on some of the wireless carriers, and most of them, I think, have responded well. Some hard decisions were made, some technologies were dropped, and fines were levied, but we all needed to get a well-deserved kick in the pants to get back on track.

The numbers reveal the progress. Five of the six nationwide carriers report that they have deployed 70 percent or more of Phase I requests. It is not enough, but it is a good start, and it is a huge improvement over what we have seen in the past. Phase II is now deployed to more than 300 PSAP's in 16 States. Again, it is not much, but it is a lot more than we had, and it shows that we are getting the job done. We are starting to see the roll-out in actual deployment. Millions of GPS-enabled handsets have been sold. Sprint alone sold 5.8 million of them. Some of this deployment is a direct result of consent decrees that were negotiated by the Commission in earlier enforcement actions.

Now, the FCC absolutely can and must do more to speed the roll-out of E–911. In my view, we can never do enough. That means

when carriers come seeking waivers or extensions, we have to think enforcement first. We must continue to give guidance to our partners on State public utility commissions on cost recovery, and other deployment issues. We have got to continue to respond to PSAP's need to deal with such issues as unintentional 911 calls, and noninitialized phones.

Finally, we should aggressively support the incumbent local exchange carrier's vital role in this. We have heard about it in the Hatfield report. We heard about it again this morning. We must continue to convey to them the importance of this as we have done over the last year.

I certainly share Commissioner Abernathy's enthusiasm about the Commission's upcoming E–911 Coordination Initiative that we are announcing this morning. This initiative, along with our ongoing outreach efforts, will ensure the FCC continues to lead the deployment effort for wireless E–911, as Congress clearly envisioned and as this committee intended when it enacted the 911 Act. But we really need your help as well, and I think this morning is very helpful to us. Given that the FCC has no jurisdiction over many of the key players in this effort, the continued leadership of members of this Committee and the Congressional E–911 Caucus will remain essential.

For example, the Commission does not have the ability to ensure that States do not raid funds specifically set aside for E–911 services. We do not have the financial resources to help those PSAPs that want Phase II service, but are located in jurisdictions without a cost recovery mechanism, or if they have a mechanism, from which they are not getting any funding, as we heard about in the case of New York.

So we are all partners in this effort, and it is up to us, and I really mean all of us in this room and those that we represent, to work together to get this done quickly and effectively. I look forward to working in partnership with you and the other stakeholders who share our commitment to finish this job.

So thank you for the opportunity to testify, and I would be happy to answer any questions you might have.

Senator BURNS. Thank you, Commissioner. We have been joined by Senator Nelson of Florida.

STATEMENT OF HON. BILL NELSON, U.S. SENATOR FROM FLORIDA

Senator NELSON. Would you put my statement in the record?

Senator BURNS. We would.

[The prepared statement of Senator Nelson follows:]

PREPARED STATEMENT OF HON. BILL NELSON, U.S. SENATOR FROM FLORIDA

Enhanced 911 is the most important challenge facing the wireless industry.—I want to tell you a story about Karla Gutierrez. This young woman might be alive today if Enhanced 911 technology had been in place when her car left the Florida Turnpike and plunged into a canal. Gutierrez called for help from her cell phone and informed a 911 operator that she was sinking, but she couldn't provide authorities with her exact location.

By the time she was found, it was too late. Her car was discovered upside down in the water by a State Trooper who happened to notice a broken guardrail where her car spun out of control.

Florida was working to install E–911 when the accident occurred, but Karla's death served as a wake-up call that the process needed to be accelerated.

Since Karla's tragic accident in February 2001, the State of Florida, working with the telecommunications industry, has made significant progress in implementing E–911 systems across the state—but much work remains to be done.

The task of implementing a statewide Enhanced 911 system in Florida has been challenging for local jurisdictions and carriers. While Florida has a population in excess of 15 million, there are counties with populations of less than 15,000 people, and individual system designs have required different approaches.

Despite these difficulties, E–911 is needed more today than ever before.—During this time of heightened security we are asking state and local public safety officials to bear an increased share of the burden of keeping America safe. We are asking them to do more law enforcement as federal resources are shifted to the war on terror and we're asking them to be prepared for attacks including the use of weapons of mass destruction which could result in mass casualties.

The least we can do is ensure that local jurisdictions have the resources necessary to deal with the new public safety challenges posed by terrorism including making sure every PSAP is equipped and prepared to request E–911 service from carriers.

Florida has come a long way in the last couple of years not in small part due to the State's E–911 Coordination Board and the state's decision to allocate funding to pay for a portion of the E–911 upgrade. But we need to stay on top of this issue at the federal level to make sure this important process is moving forward. I look forward to working with the Committee to ensure this process is completed in a timely manner.

Senator NELSON. I have to go to a classified briefing, and I also have a couple of questions if I could insert them for the record.

Senator BURNS. We would sure step aside and let you ask your questions now, if you have any. If you do not have any, next time, duck.

[Laughter.]

Senator NELSON. I was just going to say—you have a great way of putting it in words, Mr. Chairman.

Mr. Chairman, I was just going to say, this is personal to us in Florida. We have a lot of canals along major roads, and there was a lady named Karla Gutierrez that her car went out of control, she went into a canal, she was using her cell phone, she could not tell the dispatcher where she was, and it was too late by the time that the trooper got there, so it is just another example of with technology that is available now, by the way, technology that is as a result of the space program, Mr. Chairman, that we can make this, that our citizens are the beneficiaries, and so I encourage it, and I thank you for letting me make this statement, and I will just submit the questions for the record.*

Senator BURNS. Thank you. First of all, I know you have been handling waivers and this type of thing on the areas where deployment has not taken place. Wireless carriers continue to challenge those rules with respect to the PSAP readiness and have recently sought reconsideration once again.

How does the Commission balance the relative importance of PSAP readiness and the obligations of the wireless carriers, and the problems that they face? Anybody—I know—do you study those waivers on a case-by-case basis, or is it a blanket situation?

Ms. ABERNATHY. Well, it depends upon the specific waivers involved. When it comes to the largest, the wireless providers, those have been case-by-case reviews generally involving a request for a bit more time to initiate the roll-out. We have never given any

*The questions referred to were not available at the time this hearing went to press.

waiver of the back-end date, the 2005 date by which they need to be ready, and in each instance, we have looked at the technology involved, the efforts of the carrier, and what has been going on on their part.

When the PSAP issues have arisen, we have been dealing with questions regarding, if a PSAP puts in a request for E–911 capability to a wireless carrier, and the wireless carrier then devotes resources to a particular community, the wireless carrier wants to make sure that in fact that PSAP is ready to rock and roll, and that they are not devoting those resources from another community, so we have spent some time and effort ensuring that the PSAP does, in fact, have a cost recovery mechanism in place, and that the necessary upgrades will be completed in time to ensure that it is a valid PSAP request.

And then with regard to any other waivers that are in place, we did look at rural wireless providers. We gave them a longer timeframe to start the initial roll-out of either a network solution or a handset-based solution. The reason we did this is that the costs were very significant upfront, and the belief was, if the largest carriers did the initial placement of requests for the technology and for the handsets, the cost would be driven down by the time the wireless guys started the roll-out, and it would make it much easier for them to assess the technology, because it would be there on the shelf, they would have better information, so those waivers have been handled more on a broad scale for the mid-size and the small LEC's, as opposed to the waiver process for the largest of the wireless providers.

Mr. ADELSTEIN. I would just add that, we will take an extremely hard view of waivers going forward. We are thinking enforcement first now, as I indicated in my testimony, and we will only consider waivers in the most narrow circumstances, with a substantial justification backed up by hard evidence. We prefer to use enforcement mechanisms that lend to a consent decree, to make sure that there are strong plans and forfeiture provisions going forward to address any issues that result from waiver requests.

You know, at the time that we initially did provide for these waivers, we came up with carrier-specific compliance plans, so that while a waiver was given, the Commission required carriers to meet certain deadlines, and roll this out. Now, if they come back to us again and say, well, we need another waiver, they had better have a good reason, otherwise we will just send it to enforcement at that point.

Senator BURNS. Senator Boxer.

Senator BOXER. Commissioner Adelstein, I am really glad to hear that, because I was concerned when the waivers were granted in October 2001, and I guess I do not think you were on the Commission at that time, and so I could talk to Commissioner Abernathy about that.

My own view at the time was that the waiver was sending the wrong message, and I guess I want to ask you, since you voted for that, you do have a chance to now send a message to a lot of people in this room about future waivers, and I am glad the Chairman started off with that, because it is not going to do us any good if we have all these great plans and we hear all these horrible stories

about people who have lost families, and then we are just moving forward, and then there are waivers. It does not do us any good.

So maybe you could make a statement on your view about future waivers on final deadline dates.

Ms. ABERNATHY. Thank you, Senator. Yes, I think we did learn our lesson on those first waivers. The companies came in basically requesting waivers at the time saying, look, we do not manufacture the equipment, the equipment is not available, we are going to miss the initial deployment dates and please give us these temporary waivers pursuant to these facts. We did that.

They then came back, and they still were not ready, at which point we said, we have learned enough. We sent them to enforcement. We have subsequently entered into consent decrees with fines or contributions to the Treasury, as well as very concrete rollout dates, and we are in lockstep, Commissioner Adelstein and I, as far as where we go from here. You know, the technology is there now, the equipment is there, they are pretty much—absent something highly unusual, these are enforcement matters.

The good news is, the wireless carriers have, I think, gotten the message, too, and they, at this point, it appears, are not the slowdown. I think in virtually all instances where the PSAP is ready, the wireless carriers are moving forward, but that, you know, along with all of your efforts we have to keep up the pressure and ensure that everyone knows this is not a matter of taking excuses any more. It is a matter of rolling out the services.

Senator BOXER. Good. Well, I think, Mr. Chairman, thanks to your leadership, and this hearing today and the announcement that you have the special working group or subcommittee, or whatever you are calling it, and the statements made by these two fine commissioners today, I just think the message is clear, and it is very uplifting to me.

I just have one question, Mr. Chairman, then I am done, and that is, you have given me this really fine article in *Consumer Reports,* or your staff handed it to me this morning, and I would ask unanimous consent to place it in the record of this hearing.

Senator BURNS. Without objection.

[The information referred to follows:]

ConsumerReport.org, February 2003

WILL YOUR CELL PHONE REACH 911?

YOU CAN'T BE SURE. OUR RESEARCH PRODUCED SOME DISTURBING RESULTS.

One in three people who own a cell phone say they bought it mainly for safety—to have if they need to call 911 from the side of the road or a dark street at night. And at least one-third of all 911 calls are now made on cell phones—just under 57 million calls in 2001, according to the Cellular Telecommunications & Internet Association (CTIA), a trade group.

As large as that number is, it's not the total. Some cellular calls to 911 never get through. The number of failures can't be known; a call that goes nowhere can't be tracked. Our research does give some dimension to the problem, however.

When we surveyed 11,500 subscribers to *ConsumerReports.org* last fall, 1,880 said they had tried to call 911 using a cell phone in the previous year. Some 15 percent of them, or 280 people, said they had trouble connecting; that includes 4 percent who never got through at all.

For most of those, a weak signal, a bad connection, or some other phone-system problem seemed to have caused the trouble. Trouble for the remaining respondents

apparently involved the emergency system: excessive rings, unanswered calls, or being left on hold.

Wireless 911 calls in California seem especially problematic, according to our survey. There, nearly 12 percent of calls to 911 never succeeded; one-third of our California respondents said they encountered some difficulty getting through to 911.

When we went into the field, we found problems with the system. With a significant number of the calls we made to real 911 centers, the phones did not do all we believe they could to make calls connect.

As anyone who has used a cell phone knows, dropped calls and bad connections are a part of everyday life. "Consumers know when they pick up a wireless phone they're making a trade-off between mobility and service quality," says Travis Larson, a CTIA spokesman.

But shouldn't 911 calls be different? After all, the landline phone system has been especially designed to put through essentially every 911 call. And the Federal Communications Commission (FCC) has a regulation designed to be a kind of safety net for cellular (otherwise known as wireless) 911 calls, to improve your chances of getting through.

System Realities

The wireless phone system in the U.S. often handles a call to 911 just like any nonemergency call. Here's how:

The phones can be all-digital or, more typically, digital with analog calling as a backup. Analog is the common wireless language, compatible with any carrier that provides such service. (Phones with analog and digital modes are known as dual-band, tri-mode, or multinetwork.) Most wireless phones in the U.S. use one of four incompatible digital modes.

When your phone is in digital mode, it can work only with your home carrier (the company you use for service) for any call—including those to 911—unless the home carrier has a roaming agreement with another carrier.

Phones that can work in both digital and analog modes give you more options. Analog provides that safety net for emergency calling. Indeed, the principal FCC regulation governing wireless 911 recognizes the importance of the analog mode.

The regulation, which took effect in 2000, says that whenever a wireless phone dialing 911 in analog mode can't get through via its home carrier, that phone must seek another signal, even if it's from a competing carrier, to quickly establish a voice connection.

The FCC concedes its rule is only a small step toward improving 911 service. Multinetwork phones, which are normally in a digital mode, aren't required to switch to analog to make a 911 call. There are no regulations for digital-only phones, such as the kind offered by T-Mobile and Nextel.

Who provides an analog safety net?

Only some major national wireless-service providers offer an analog safety net as well as digital calling.

Company	Digital format*	Analog backup
AT&T Wireless	TDMA, GSM	Yes
Cingular	TDMA, GSM	Yes
Nextel	IDEN	No
Sprint PCS	CDMA	Yes
T-Mobile	GSM	No
Verizon Wireless	CDMA	Yes

*Digital-format abbreviations are defined in our February 2003 report on cell phones.

Testing The System

Last summer, an engineer working for the Wireless Consumers Alliance, a nonprofit advocacy group, used our labs to demonstrate that wireless phones dialing 911 in analog mode and covered by the FCC regulation may still fail to connect.

That led us to conduct our own real-world tests to find out what would happen in places where a home carrier has a weak signal but competing carriers have strong signals.

We ran two rounds of trials making 911 calls to active emergency-communications centers. We had the full cooperation of local officials in Steuben County, Ind., and Sullivan County, N.Y., and were assured that our testing did not interfere with response to real emergencies.

Both areas receive a heavy influx of travelers and vacationers, people who are likely to be far from a home calling area. Major highways cut through both counties. Steuben County is well served by a local carrier that uses the same digital system

as AT&T Wireless; service from Verizon Wireless and Sprint PCS, however, is marginal. In the area of Sullivan County where we ran our tests, the reverse is true: Verizon and Sprint have strong signals, but AT&T is marginal.

All the phones we used in the tests have analog and digital capability. According to FCC registration data, only one of the phones we used was made before the 911 calling regulation took effect. The manufacturers certified that the phones meet all applicable FCC rules.

In Steuben County, we made 14 test calls on 12 different phones with accounts from Sprint and Verizon. In Sullivan County, we made 7 test calls on 6 phones with accounts from AT&T and Cingular. Overall, of the 18 phone-and-service combinations tested, 9 calls failed to connect to 911. In every instance, there was a strong signal from another carrier the phones could have used.

In a separate test, some phones connected to 911 on a strong analog signal from a competing carrier when they couldn't find any home-carrier signal.

Our two field tests represent a small picture of a situation that can change with time and location. But we believe that the results illustrate a significant problem—a phone's inability to switch from a too-weak home-carrier's signal to a strong signal available from another carrier.

What Needs To Be Done

The 911 system needs fixing. The FCC's 911 regulation is out of date for today's wireless phones, which increasingly depend on digital—not analog—technology. When the rule was written, fewer than half of the wireless customers used a dual-mode phone; that has now surpassed 87 percent.

The FCC's regulation also defies "general common sense," says Roger Hixson, technical issues director for the National Emergency Number Association, the nonprofit umbrella organization for U.S. emergency call centers. Hixson explained that phones that can't connect in a digital mode or don't automatically roll over to analog for an emergency call "subvert the idea that any call dialed to 911 has to be handled by the wireless carrier and brought into the call delivery network."

The FCC needs to impose higher standards for the wireless 911 system. A reasonable way to start could be to change the current regulation to apply as well to multi-network phones dialing 911 in digital mode. If the call can't be quickly completed through the home carrier, the phone should seek another signal.

Manufacturers and carriers need to invest in safety. We think carriers should make the existing 911 system work more effectively, which may require some reprogramming of the phones.

The FCC must ensure that digital phones are more compatible. The FCC voted last fall to phase out its requirement that some wireless providers offer an analog backup signal. We think that was a mistake because the agency did not also require companies to make their digital technologies talk with one another. Simply allowing analog to fade away removes the principal common wireless language. In the end, you will have less assurance than you do now that your phone will get through to 911.

The industry needs more diligent oversight. The FCC has the industry on an honor system. The agency does no testing to monitor compliance with its 911 rule, says Steven Dayhoff, an electronics engineer at the FCC labs. Of wireless companies and 911, he says, "We assume that they have the software or firmware for call-handling that they're supposed to have." He noted, however, "We have not tried it out."

At a minimum, the FCC should run its own tests to see that phones perform as they should—and as manufacturers have certified—when dialing 911.

Last November the Wireless Consumers Alliance filed a series of class-action suits in federal and state courts against various wireless phone manufacturers and service providers, maintaining that they knowingly sold phones that did not comply with the FCC's regulations. The suits seek injunctions against the sale of the phones, as well as monetary damages. Consumers Union, publisher of *Consumer Reports,* is not a party to those suits.

What You Can Do

- Do not dial 911 to test the system. It's unethical and, in many areas, illegal.
- Avoid digital-only phones or carriers if you want a cell phone for emergencies. See the table above.
- Some phones that use the Code Division Multiple Access (CDMA) digital format can be forced into analog by the user. Check the user's manual.
- If you don't use your cell phone every day, make sure that its battery stays charged.

- While driving, leave the phone on and its antenna extended. That may shorten the time needed to reach 911.
- If you have trouble connecting to 911 from inside a car, get out, if possible, and call from the side of the road; that may help you get a better signal.
- In an emergency, ignore a "no service" message on the phone's display. Try the call anyway.
- Tell the FCC what you think of the present wireless 911 system. To register a complaint or voice your opinion, contact the agency at 888–225–5322.

For more information about wireless calling and advice on how and where to complain about service, go to our advocacy web site, *www.consumersunion.org*.

Senator BOXER. And I wonder whether you have seen it yet, either of you, called "Will Your Cell Phone Reach 911? You Can't Be Sure, Our Research Produced Some Disturbing Results." Have you read this?

Ms. ABERNATHY. I have seen that. It is very——

Senator BOXER. Just two questions here, or one question. The industry needs more diligent oversight, they have put forward here. They say, the FCC has the industry on an honor system. The agency does no testing to monitor compliance with its 911 rules, and I wonder how you would respond to that, either of you or both of you.

Mr. ADELSTEIN. Well, I think there is a deep concern. I saw that article, and people are not getting through. This is not even Enhanced-911, these are people dialing and getting no answer at all when they dial 911. It kind of shows you how much of a problem we have in the broader sense, because we are trying to build upon an existing system with these enhanced capabilities. There are problems within the existing system as well, and carriers have an obligation under the rules to make sure that these calls go through. We do need to do more enforcement. This has been referred to our Enforcement Bureau, and I am encouraging them to look at the issue in a very hard way.

We do not have, I do not think, all the resources we need to do the kind of testing that we should be doing. We would appreciate any resources that Congress could provide to beef up our enforcement capabilities in this regard. I personally think it would be helpful if we had those resources to get out there and test these systems, because if a person dials that number and cannot get through, that is the end right there for some people. It might result in disability or death if they cannot get a timely response.

There is this golden hour after you have an accident. If you can get to a victim quickly, you can really make a big difference in terms of the level of trauma they suffer, permanent disabilities, or even death. So we cannot afford to have these calls not going through.

Senator BOXER. And compounding it is the fact that in some cases it appears as if people buy the phone and think that it is compatible, and is going to work, and so that is a travesty, and maybe it is even a fraud if the thing does not work, but are you saying, just because I want to hone in on this, that—do you know how to test the systems? Do you have that knowledge, and how would you do it? You tell your enforcement people to do it. What does that exactly mean? How would they go about overseeing the fact that, in fact, the companies are complying with the rules even as they are today? How do you do that?

Ms. ABERNATHY. That became part of the consent decree process that I referred to earlier, which is these quarterly reports that we are requiring from the carriers, and in those reports, we are requiring not only deployment information, but information about the types of accuracy that they are finding with the specific technologies, because what we found out——

Senator BOXER. Is that an honor system, because that is what this article says. The FCC has the industry on an honor system, not really enforcing anything, and that is——

Ms. ABERNATHY. Well, I guess in the sense that we look at what they report are the stats, and it is in coordination with the PSAP's.

Now, we may need to think about, if that will not work, where we had looked at it as a package, if the PSAP's were not getting the appropriate information, then we would know because they would tell us, but we may need to look further and see if some more direct oversight—but part of the reason for the reporting was, we did not want to rely just on, trust us, we will do the right thing. We wanted to know, in fact, they were deploying the right technology with the right kind of accuracy.

And the other good news, and the other reason why we have to continue to push for Phase II of E–911 is that the good news is there are so many consumers with wireless phones out there today that if someone sees an accident, for a single accident, you can get maybe 50 calls, 50 911 calls for a single accident, and it ties up the lines, but the people who are answering the phones do not know that it is about the same accident, and they cannot really move them quickly off the system.

With location capability, they will know. They will all cluster around a single location, and you will be able to make the entire system so much more efficient, so that other 911 calls that absolutely have to get through will get through, so the technology, assuming that we do our part, which is to make sure it works, it is deployed, the PSAP's are working together, and the ILEC's do their part, the technology, no doubt in my mind, will dramatically improve all of the personal safety of all of the citizens.

Senator BURNS. I have no further questions of this panel. We appreciate your testimony. I would like to see some movement. We did not know we were going to get lobbied for money up here, but that is OK. We handle that every day. I think you raise a good point, though, Commissioner Adelstein.

We did appropriate more money for your labs out there, and that is starting to be modernized now, but the monitoring of these systems, as you do with television, as you do with radio broadcast, the broadcasting industry, and as you do with industry, anybody that uses spectrum, of course, you have means of monitoring and engineering to make sure everybody is staying in their lane on the highway, so to speak, so if that takes more dollars then maybe we can find some loose change on the floor somewhere and get it to you if you want to pursue that.

We have been joined by Senator Brownback of Kansas. We welcome you, and we had the first panel. This is the second panel, the FCC, and if you have any comments or questions of this panel we would sure welcome them at this time.

STATEMENT OF HON. SAM BROWNBACK, U.S. SENATOR FROM KANSAS

Senator BROWNBACK. Thank you very much, Mr. Chairman. I appreciate that, and I appreciate you holding the hearing and pressing this issue of E–911, because it is lives that are at stake and lives that will be saved, and I think your pushing this forward will be very helpful in the effort to save a number of people's lives.

If I could just note that there have been some difficulties. The Chairman is well aware of some of those. We need to correct those in the overall process to make sure that this works.

I come here to the hearing for two purposes. One is to express support for E–911, because I think it is a great product and something we really need to do, and we have got to get the process down completely. But also to note, there have been a lot of difficulties recently at the Federal Communications Commission creating uncertainties in the marketplace that I think the Commission really needs to look at aggressively and consider what it is doing. The triennial review process, that has really created conflicting Federal–State jurisdictional standards supposedly derived from one Federal standard in the act. I voted for the Telecom Act, but I cannot recall ever voting in favor of regulation by multiple choice.

This is something that has been widely covered in the media overall, and my point in saying it is that the FCC has done this with this Telecommunications Act, created a great deal of uncertainty. I hope the FCC can get something like E–911 correct, and working well, given what is apparently going to take place in the triennial review that is coming forward.

I do not intend to spend time today discussing the particulars of that. It has not been written yet. I know we have heard a lot of rumblings, and there has been tens of billions of dollars moved in capital marketization as a result of the rumors out from it. I really hope the FCC can work together, can work unified, can address some of these issues that have really been problematic within telecommunications.

I hope we can do well with E–911, dealing with its problems, and within the Triennial Review, and if either of you would care to comment on that, I would appreciate hearing any explanation that you might have, or thoughts.

Mr. ADELSTEIN. Senator Brownback, that is a very good point. I would like to say that this Commission is as unified on this issue as I have ever seen us. Of course, I have not been there that long, but I have spoken to each of my colleagues about this issue. I have spoken to the Chairman about it and every one of my colleagues, and to a person, they have indicated that they have absolute, 100 percent commitment to getting this job done, to getting E–911 deployed as quickly as possible, as effectively as possible, and to taking a leadership role in the Commission on trying to coordinate the many different parties that are involved in this. They see it as a life-and-death issue, as I do and you do.

So it is wonderful to see that kind of unity. It is wonderful to see that kind of commitment, and I think that should provide for certainty. The message should go forth from here today that the FCC is on top of this, that we are going to get it done and that we are not going to have a lot of patience for anything that slows this

down. That is, I think, a good message coming out of the previous couple of weeks.

Ms. ABERNATHY. I think the only point I would add is, one of the reasons that Commissioner Adelstein and I were both anxious to be here today is to demonstrate that this is a united FCC on public safety, on E–911. We will do what it takes. We will step up to the plate and show leadership in the coordination efforts that are a critical piece of this, and you know, I cannot think of an issue, again, and I have been around a little bit longer than Commissioner Adelstein, where all of us are in complete agreement about the need to see that this happens as soon as possible, as effectively as possible.

Senator BROWNBACK. Well, I am concerned about the process, and I hope you follow up and you pull together in the process to get this one done. The last one on the Triennial Review to date looks very divided and difficult, and has resulted in a lot of difficulties for a number of companies. At a time when we need more capitalization going to telecommunications, not less, you have created a regulatory uncertainty that is draining money from a sector of the economy that we really need to help.

We need it to grow. We do not need it to be drained, and I would hope, as you are getting the final order on that one, that maybe you can look and see, what is it that we can get done here that is going to help this industry to move it on forward at a time that it has gone through a real wrenching period, and yet it is such a critical industry to our economy.

This industry needs to perform well for us to move forward as an economy. We are trying to get the overall economy moving forward more aggressively now. It is a soft economy. A lot of people are having difficulty. We can do things broadly, tax policy, but we also can do things sectorally to try to push various industries, and here is one that really needs to have an FCC that is going to try to get that industry moving forward aggressively and together, and I hope you will take a hard look at doing that.

Mr. Chairman, I would like to put a full opening statement into the record, if I could.

Senator BURNS. Without objection.

[The prepared statement of Senator Brownback follows:]

PREPARED STATEMENT OF HON. SAM BROWNBACK, U.S. SENATOR FROM KANSAS

Today the Committee convenes to review the status of E–911 implementation. This is an extremely important issue, as increasing numbers of Americans cut the cord and go wireless. In Kansas there are plenty of places where wireless subscribers may find themselves in need of emergency services, but without access to a wireline phone or geographic markers that would permit them to inform emergency services of their location—to say nothing of those dire circumstances where they may be physically unable to identify their location.

E–911 will ensure that our constituents, regardless of their location and condition, can be located by public safety and law enforcement in the event a 911 call is required. Unfortunately, E–911 has developed into an issue requiring continuous oversight. In order for E–911 to be a success, all stakeholders—federal and state regulatory authorities, public safety and industry—must work together to ensure the vital interests of the public are met.

Given the oversight role performed by the FCC on E–911 implementation I would like to thank Commissioners Abernathy and Adelstein for joining us today. It is all too infrequent that we have the opportunity to visit with our FCC Commissioners, who have the responsibility of administering our nation's telecommunications law—

vital for providing for public safety and welfare, and of ever increasing importance to our nation's economy.

I find myself presented with this rare opportunity at the same time I have concluded that there are serious problems at the Federal Communications Commission. Today we are here to address E–911 implementation, but how can the Commission be expected to help make E–911 a success if the Commission is broken?

An FCC Commissioner's job—his duty—is to ensure that he first does no harm. The Commission's recent Triennial Review hardly embraced that concept. Today we are faced with unprecedented uncertainty in the telecom sector created by fly-by-night rulemaking, public admissions by a Commissioner suggesting he didn't know what he was voting on, and a final product consisting of what appears to be conflicting federal-State jurisdictional standards supposedly derived from one federal standard in the Act. I voted for the Telecom Act, but I cannot recall ever voting in favor of regulation by multiple choice.

I do not intend to spend time today discussing the particulars of the Triennial Review—it hasn't been written yet, even though we heard rumblings about the deal making it possible several weeks ago. Instead, I will let the tens of billions of dollars in lost market capitalization, including the loss of half of the value of one company in particular, Covad, speak for the order. The *process* leading to the order, however, leaves much to be desired.

Later this morning I will be meeting with Chairman McCain to discuss the Committee's agenda, and I intend to ask him to make FCC reform a priority during the 108th Congress.

Senator BROWNBACK. And again, I want to thank you for holding the hearing.

Senator BURNS. Thank you, and thank you, Commissioners, for coming today. We appreciate your testimony and your interest in this issue, and if you will work with the providers and the vendors, we will sure work with the PSAP's to make sure they get the money and they are ready for the actions you have taken, the results of your actions, so thank you very much.

Ms. ABERNATHY. Thank you very much, Mr. Chairman.

Mr. ADELSTEIN. Thank you, Mr. Chairman.

Senator BURNS. Our next panel consists of both carriers and those folks who coordinate the different programs around the country. We have Ms. Jenny Hansen, Manager of State of Montana Public Safety Services Office, John Melcher, President of the National Emergency Number Association, and Thera Bradshaw, Association of Public-Safety Communications Officials, Mr. Michael Amarosa, Vice President, Public Affairs for TruePosition, and Mr. S. Mark Tuller, who is General Counsel of Verizon Wireless with us this morning, and we certainly appreciate the participation of these folks, who really, it drops in their lap on coordinating and developing the systems that serve our respective States.

First of all, I want to welcome Ms. Jenny Hansen, Manager of the State of Montana Public Safety Services Office. It is good to have you back, Jenny, and you have been back here often enough you can almost vote here now, but we certainly appreciate your work. I did leave a copy of your State plan with each one of the members of the Committee, and we appreciate you bringing that along, so with that, if you want to summarize your statement we can do that, but your entire testimony will be made a part of the record.

Ms. Hansen, please.

STATEMENT OF JENNY HANSEN, MANAGER, PUBLIC SAFETY SERVICES OFFICE, STATE OF MONTANA

Ms. HANSEN. Mr. Chairman, thank you. Members of the Committee, Senator Burns, thank you very much for providing me with this opportunity to speak to you today. I am Jenny Hansen, Manager of the Public Safety Services Office——

Senator BURNS. Pull that microphone up a little closer.

Ms. HANSEN. I am Jenny Hansen, manager of the Public Services Office for the State of Montana. I sat before this committee a year ago, a little over a year ago, in October of 2001, testifying about the challenges of deploying wireless-Enhanced-911 in rural America, among other public safety challenges we have. My testimony at that time took place amidst a world of new-found interest and heightened sensitivity to what public safety professionals do. Our bottom line is to save lives. It is the reason we are here, and the answer we give when we are asked what we do.

Mr. Chairman, I would like to take this opportunity to thank you for your leadership on this issue in Montana and throughout the Nation. Your 1999-sponsored Wireless Communications and Public Safety Act was an important road map in deploying wireless 911. Then-President Clinton signed that bill, Senate bill 800. Last week, the co-chairs, yourself and Senator Clinton, launched the E–911 Caucus, bringing together leaders from Government, emergency response, and industry to grapple with the challenges facing our Nation in deploying modern emergency response technologies.

The E–911 Caucus brings focus to the 911 industry. More importantly, it provides a platform for getting the right resources to the right people at the right time to save lives. I thank the membership for their leadership on these critical issues, and look forward to the work and successes ahead.

The fundamentals of public safety are just that, fundamental. You have said that 911 should be a no-brainer, yet 911, let alone public safety technology alone, is not a plug-and-play operation. There is a delicate balance between people and their privacy, the price of technology and the return on investment, rules to participate, and enforcement issues when you do not comply. Which one has a greater cost?

I remember a conversation with a wireless carrier's representative who, when discussing the feasibility of deploying wireless E–911 in Montana actually compared telephone networks by citing, "there are actually more switches in a highrise in New York City than there are in the State of Montana." What we have is what we have. The fundamental needs are the same. We need each other, the collaborative make-up of this room, to take care of the bottom line, and for us, whether we are in New York or in Montana, the bottom line will always be saving lives.

Project management is typically tempered with strategy. We must first build a foundation upon which to build and add and improve technology, time- and life-saving tools to ensure the bottom line. What does that mean in our industry? You need basic 911 before you can move into Enhanced-911, and you need to have enhanced landline 911 before you can move into wireless Enhanced-911. It may sound reasonable, even simple, but there is so much

that has to be done between A to Z that in our zeal to reach the finish line, we must never forget, or leave anyone behind.

Technically speaking, it is not possible to deploy wireless E–911 without everyone in that chain of survival being proactive and successful in their own right. If one cog in that wheel fails, we all fail.

We have heard arguments about who is ready and who is not. The success stories we are hearing today are the culmination of solution-oriented project teams versus finger-pointing sessions, with delays being seen as conveniences instead of a threat to public safety. Project management is a role we all have in this business of deploying E–911. Each of us, however, has our own limitations in our respective jurisdictions, our authority, and ability to enforce the rules. It is here where we need your help.

An added factor, the cost of doing business in rural America, has inherent challenges. The fourth-largest State in the Nation, Montana covers over 147,000 square miles, encompassing over 550 miles of international border, the mountainous terrains of the Northern Rockies, and the vast flatlands of the Northern Plains.

Montana's total population of fewer than 900,000 is unevenly distributed across the vast area of the State. Over half of the Montana residents are concentrated in only six counties that exceed 50,000 in population. Fewer than 400,000 Montanans are spread throughout the State's remaining 50 counties. Everyone I know does the work of two, three, or four people, doing more or less and with less as the rest of us in this country, but at a significantly greater margin.

Demographics aside, it is truly the last best place. Integrity, for the most part, is the way of life in this big small town. Deals are still made on a handshake. Your word is your deed. We do whatever it takes to take care of business.

I recall many a morning at O'dark-Thirty, you call it in public safety lingo, meeting with the fire council at the local truck stop to identify needs, recommend solutions, turn them into action items before the sun came up, and it was time to tend to their fields and their cattle, volunteers for the most part, some at or near retirement age, a characteristic not unique to Montana, but more of a challenge for us in public safety to use and recognize the resources we have in this country and, more importantly, provide them with the resources so they can do their jobs safely, seamlessly, and in the Nation's eyes, heroically. In their own eyes, all in a day's work.

We respect each other's privacy in Montana, and we have a Constitution that addresses this unlike any State, and many States in this country. This has presented unique challenges to the public safety community and, most recently, homeland security discussions in identifying risks, sharing intelligence, and deploying mitigation strategies.

In communities with great need, each step forward is a success story. Like my colleagues testifying before you today, we have successes of our own. In the last year, the Governor's office created the Public Safety Services Office in the Department of Administration. The Public Safety Services Office manages the State's 911 program and the State-wide planning of public safety radio communications.

Montana is among only a handful of States that have attained State-wide basic 911, but Enhanced-911 service is expected by the

public, even in remote areas. The 911 program is successful due to extensive cooperation among legislators, regulators, State and local government administrators, and the telephone industry. Continued success will require further cooperation to solve impending problems caused by new technology and conditions.

Montana's 911 program successes include landline E–911 deployments, and in the past year, our first year of our office, of the 58 public safety answering points, we have gone from 8 to 16 public safety answering points providing E–911 landline services with an additional 29 E–911 plans developed and approved for deployment in fiscal year 2004.

We have an aggressive work plan where the goal is State-wide landline E–911 services by 2005. Additionally, by establishing minimum standards or characteristics of our 911 technologies, and with the collaborative efforts of public and private stakeholders, local and Federal offices, the State will be Phase II-ready by 2005. Each PSAP is researching the best approach for embracing new technologies. Gallatin County and the city of Bozeman is within 6 weeks of deploying Phase I E–911.

There is a lot of work ahead. This long-awaited success is still met with a lot of work with respect to locating the call for help. My office is responsible for the State-wide picture. We are looking at solutions that can move the State forward into an interoperable public safety environment. Currently, our discussions include building our own routers, moving the State all at once into a Phase II readiness stage, and identifying what the costs are and the benefits, and the next steps for deployment.

We are also undertaking the issue of upgrading the multiple-line telephone system, MLTS, or public branch exchange PBX.

Telephone systems in many schools, hotels, large businesses, hospitals, or even large multifamily units only provide the main number and billing location for these MLTS systems, not the direct phone number or exact location. 911 calls in many of these systems suffer from inadequate and even incorrect location. This is a daily problem for the Nation's 911 professionals, and leads to delays in law enforcement, fire, and emergency medical response.

The first step in providing E–911 services on an MLTS is to make sure we practice what we preach. For us in Montana, it is the State capitol complex, then local government buildings, school districts, universities, and so on.

Some institutions raise concerns about E–911 installation and maintenance costs. The reality is, when viewed as an add-on feature to a new premises-based system, E–911 generally costs less than 5 to 10 percent of the total expense.

Of greater concern to an institution may not be the cost, but the liability. The lack of an adequate E–911-ready system is a potentially catastrophic financial risk. Past court decisions have held institutions and managers personally liable for safety and negligence. I applaud corporations such as American Express and State Farm Insurance, who are proactive in providing life-saving solutions on their MLTS, for their employees and their families.

The interrelationship between people, technology, and training is the foundation of public safety communications. Building that foundation is a collaborative effort that is represented by the make-up

of this room. Providing 911 telephone networks to make and answer the call for help, the interoperable radio system upon which to send help and ensure the safety of the field units, and securing the programs and budgets of the offices supporting these efforts takes the concerted efforts of everyone in this room, not just today, but every day, 24 hours a day, 365 days a year. This includes putting a stop to the new trend of diverting 911 funds, also referred to as State raids, paid by the consumers to augment deficits in State budgets.

Currently, 33 States have 911 programs and most, but not all, have responsibility for both wireline and wireless 911. The State coordinator's scope of authority needs to cover both technologies. The remaining States have been slow to make appropriate appointments, according to your Senate bill 800 and Public Safety Act, and the FCC's order. Appropriate in this case means the appointee has working knowledge of wireline and wireless E–911 issues and technology, and has the State-wide authority and organizational capability to effectively coordinate the deployment of State-wide E–911.

Effectively means that the appointee is in a position to bring the stakeholders together for cooperative working relationships in the interest of achieving economies of scale that only come with a State-wide vision and a State-wide plan. Today, much of the R&D or research and development for future interoperable 911 systems is done by volunteers, again most at or near retirement age. Some may say an incentive is needed to move public safety R&D efforts forward.

There are several R&D efforts already underway. We do not need to reinvent wheels, merely sharpen our focus. Many have developed solutions, authored documents, and made recommendations toward the deployment of 21st Century tools. The USDOJ's Office of Community-Oriented Policing Services has studied the effects of 911 technologies on the law enforcement community. This guide, presented in your packet for your consideration, *Misuse and Abuse of 911,* is based on sound problem-oriented policing principles and, as new technology is deployed, new challenges are identified. Unintentional calls occur when a person or phone inadvertently dials 911. This category includes phantom wireless calls and misdials and hang-ups.

Deployment of new technologies has a cause-and-effect relationship with the public safety community. With the commencement of wireless E–911 Phase II, 911 centers will have to determine whether they dispatch to phantom call locations. If they adopt this approach, the drain on police resources could be enormous. For instance, the California Highway Patrol estimates it would potentially need twice its current number of officers to respond to the 1.8- to 3.6 million phantom calls it receives annually.

The R&D is being conducted now, with education and outreach programs underway, and by the time we reach national deployment, we should have solutions to these 21st Century problems. However, the problem is already serious enough to suggest that ignoring it could have severe ramifications for police and legitimate 911 callers elsewhere.

Senator BURNS. Could we wrap up a little bit, at the risk of losing a vote here?

Ms. HANSEN. Certainly. Vermont and other states have success stories on State-wide deployments. A frustration that California shares is one in their hindrance in getting the LEC's, the local exchange carriers, to file and upgrade their systems. One would upgrade, and one would lag behind. That would allow the project to move forward with their implementation.

We all have APCO, NENA, NASNA, never a shortage of Government work and acronyms. All successes and all frustrations, but again it is the Federal request on project management where we need your help on enforcement.

We are required to take a leadership role with respect to planning for public safety communications systems. We are challenged to prepare for the impacts of dramatically changing communications environments. We are coordinating our efforts with E–911 caucuses in testimony similar to this. The State of Montana does not need to replicate New York, but asks for equal access to the basic systems in public safety that are available today.

In collaboration with your efforts, all the stakeholders, public and private industry, and with your help, we will get the job done. I give you my word.

I thank you for your time, your commitment to doing the right thing, and your support of the public safety industry in this Nation. Thank you, Senator.

[The prepared statement of Ms. Hansen follows:]

PREPARED STATEMENT OF JENNY HANSEN, MANAGER, PUBLIC SAFETY SERVICES OFFICE, STATE OF MONTANA

Mr. Chairman, members of the Committee, Senator Burns, thank you very much for providing me with this opportunity to appear before you today. My name is Jenny Hansen, and I am the Manager of the Public Safety Services Office for the State of Montana. I sat before this Committee a little over one year ago, in October of 2001, testifying before you about the challenges of deploying wireless enhanced 911 among other public safety challenges in rural America. The testimony took place amidst a world with newfound interest and a heightened sensitivity to what public safety professionals do. Our bottom line: to save lives. It is the reason we are here, and the answer we give when we're asked why we do what we do.

A Special Thanks

Mr. Chairman, I would like to take this opportunity to thank Senator Conrad Burns for his leadership on this issue in Montana and throughout the nation. In 1999, Senator Burns sponsored the Wireless Communications and Public Safety Act, an important roadmap for deploying wireless 911. President Clinton signed that Bill (SB800). Last week, Co-Chairs Senator Burns and Senator Clinton launched the E–911 Caucus, bringing together leaders from government, emergency response and industry to grapple with the challenges facing our nation in deploying modern emergency response technologies. The E–911 Caucus brings focus to the 911 industry. More importantly it provides a platform for getting the right resources to the right people at the right time to save lives. I thank the membership for their leadership on these critical issues and look forward to the work and successes ahead.

The Fundamentals of Public Safety

The fundamentals of Public Safety are just that . . . fundamental. Senator Burns has said, "911 should be a no-brainer". Yet 911, let alone public safety technology is not a plug and play operation. There is a delicate balance between people and their privacy, the price of technology and the Return On Investment, rules to weigh in and enforcement issues when you don't comply, which one has greater cost? I remember a conversation with a wireless carrier's representative who, when discussing the feasibility of deploying wireless E–911 in Montana, actually compared telephone networks by citing, "there are actually more switches in a high-rise in New York City than there are in the entire State of Montana". What we *have* is what we have. The fundamental needs are the same. We need each other, the

collaborative make-up of this room, to take care of the bottom line. For us, whether in New York or Montana, the bottom line will always be *saving lives*.

Project management is typically tempered with strategy. We must first build a foundation upon which to add new and improved technology, time and life-saving tools to insure the bottom line. What does that mean in our industry? You need basic 911 before you can move into enhanced 911. And you need to have enhanced landline 911 before you can move into wireless E–911. It may sound reasonable, even simple. But there is so much that has to be done between A and Z, that in our zeal to reach the finish line, we must be sure we don't leave anyone behind. Technically speaking, it is not possible to deploy wireless E–911 without everyone in that *Chain of Survival* being proactive and successful in their own right. If one cog in the wheel fails, we all fail. We've heard arguments about who's ready and who's not. The success stories we're hearing today are the culmination of solution-oriented project teams versus finger-pointing sessions with delays being seen as conveniences instead of a threat to public safety. Project management is a role we all have in this business of deploying E–911. Each of us, however, has our own limitations in our respective jurisdictions, authority and ability to enforce the rules. It is here where we need your help.

The Cost of Doing Business in Rural America

An added factor, the cost of doing our business in rural America has inherent challenges. The fourth largest state in the nation, Montana covers over 147,000 square miles, encompassing over 550 miles of international border, the mountainous terrain of the Northern Rockies and vast flatlands of the Northern Plains. Montana's total population of fewer than 900,000 is unevenly distributed across the vast area of the state. Over half of Montana's residents are concentrated in only *six* counties that exceed 50,000 in population. Less than 400,000 Montanans are spread throughout the state's remaining 50 counties. Everyone I know does the work of two, three, even four people, doing more with less as the rest of us in this country, but at a greater margin.

Demographics aside, it is truly the last best place. Integrity, for the most part, is the way of life in this big, small town. Deals are still made on a handshake. Your word is your deed. We do whatever it takes to take care of business. I recall many a morning, "O dark-thirty" we call it, (public safety lingo), meeting with the fire council at the local truck stop to identify needs, recommend solutions and turn them into action items before the sun came up and it was time for the ranchers to tend to their fields and their cattle. Volunteers for the most part . . . some at or near retirement age. A characteristic not unique to Montana, but more of a challenge for us in public safety to use and recognize the resources that we have in this country, but more importantly, provide them with the resources so they can do their jobs, safely, seamlessly, and in the nation's eyes, heroically. In their own eyes: all in a day's work.

We respect each other's privacy in Montana, and we have a Constitution that addresses this issue unlike many states in this country. This has presented unique challenges to the public safety community and most recently, homeland security discussions in identifying risks, sharing intelligence and deploying mitigation strategies. In communities with great need, each step forward is a success story. Like my colleagues testifying before you today, we have successes of our own.

In the last year, the Governor's office created the Public Safety Services Office in the Department of Administration. The Public Safety Services Office manages the State's 911 Program and statewide planning of public safety communications.

Montana is among the handful of states that have attained statewide 911, but enhanced 911 service is expected by the public, even in remote areas. The 911 program is successful due to extensive cooperation among legislators, regulators, state and local government administrators and the telephone industry. Continued success will require further cooperation to solve impending problems caused by new technology and conditions.

Montana's 911 Program successes include landline E–911 deployments. In this past year, the first year of our office, of the 58 Public Safety Answering Points, we've gone from 10 to 16 PSAPs providing landline E–911 services with an additional 29 E–911 plans developed and approved for deployment in FY04. We have an aggressive work plan with a goal of statewide E–911 (landline) services by 2005. Additionally, by establishing minimum standards or characteristics of our 911 technologies, and with the collaborative efforts of public and private stakeholders and local, state and federal offices, the state will be Phase II ready by 2005. Each PSAP is researching the best approach for embracing new technologies. Gallatin County and the City of Bozeman is within six weeks of receiving Phase I wireless E–911.

This long-awaited success is still met with much work ahead with respect to locating the call for help.

My office is responsible for the statewide picture. We're looking at solutions that can move the state forward, into an interoperable public safety environment. Currently, our discussions include building our own routers, moving the state, all at once into Phase II readiness. What are the costs, the benefits, and the next steps for deploying these tools?

We've also undertaken the issue of upgrading the Multiple Telephone Line System (MLTS) or PBX for all state buildings. Telephone systems in many schools, hotels, large businesses, hospitals, or some large multi-family housing units only provide the main phone number and billing location of the multi-line phone system—not the direct phone number or exact location. 911 calls from many of these systems suffer from inadequate and even incorrect location information. This is a daily problem for the nation's 911 professionals and leads to delays in law enforcement, fire, and emergency medical response. The first step in providing E–911 services on an MLTS is to make sure we practice what we preach. First the State Capitol Complex, then local government buildings, school districts, University systems and so on. Some institutions raised concerns about E–911 installation and maintenance costs. The reality is, when viewed as an add-on feature to a new premises-based telephone system, E–911 generally costs less than five to 10 percent of the system's total expense. Of greater concern to an institution may not be the cost, but the liability. The lack of an adequate E–911-ready system is a potentially catastrophic financial risk. Past court decisions have held institutions and managers personally liable for safety and negligence. I applaud corporations such as American Express and State Farm Insurance who are proactive in providing life-saving solutions on their Multiple Telephone Line Systems for their employees, their family.

National Solutions for a National Standard of Care

The interrelationship between people, technology and training is the foundation for public safety. Building that foundation is a collaborative effort that is represented by the make-up of this room today. Providing the 911 telephone network to make and answer the call for help, the interoperable radio system upon which to send help and insure the safety of the field units and securing the programs and budgets of the offices supporting these efforts takes the concerted efforts of everyone in this room. Not just today, but everyday, 24 hours a day, 365 days a year. This includes the new trend of diverting 911 funds (also referred to as *State raids*), paid by consumers, to augment deficits in State budgets.

Currently, 33 states have statewide 911 programs, and most, but not all, have responsibility for both wireline and wireless 911. The State coordinator's scope of authority needs to cover both technologies. The remaining states have been slow to make appropriate appointments according to the 1999 Wireless Communications and Public Safety Act and the FCC's Order. "Appropriate" means that the appointee has working knowledge of wireline and wireless E–911 issues and technology and has the statewide authority and organizational capability to effectively coordinate development of statewide E–911 plans for both wireline and wireless technologies and with all stakeholders. Effectively means that the appointee is in a position to bring the stakeholders together and forge cooperative working relationships in the interest of achieving the economies of scale that only come with a statewide vision and a statewide plan.

Today, most of the Research and Development for future, interoperable 911 systems is being done by volunteers, again, most at or near retirement age. Some might say an incentive is needed to move public safety R&D efforts forward.

There are several R&D efforts underway. We don't need to reinvent wheels, merely sharpen our focus. Many have developed solutions, authored documents, made recommendations toward the deployment of 21st Century technologies.

The U.S. Department of Justice's (DOJ's) Office of Community Oriented Policing Services (COPS) has studied the effects of 911 technologies on the law enforcement community. *The Problem-Oriented Guides for Police Series—Number 19: Misuse and Abuse of 911* is based on sound problem-oriented policing principles, and as new telephone technology is deployed, new challenges are identified. Unintentional calls occur when a person or phone inadvertently dials 911. This category includes phantom wireless calls, and misdials and hang-up calls. Deployment of new technologies has a cause and effect relationship with the public safety community. With the commencement of wireless E–911, Phase II, 911 centers will have to determine whether they will dispatch to phantom call locations. If they adopt this approach, the drain on police resources could be enormous. For instance, the California Highway Patrol estimates it would potentially need twice its current number of officers to respond to the 1.8 million to 3.6 million phantom calls it receives annually. The R&D is

being conducted now, with education and outreach programs underway, by the time we reach national deployment; we should have solutions to these 21st Century problems. However, the problem is already serious enough to suggest that ignoring it could have severe ramifications for police and legitimate 911 callers.

The U.S. Department of Transportation's (DOT's) Wireless E–911 Initiative provides stakeholder leadership, technical assistance, and technological innovation. A recent report on Wireless E–911 technical and operational issues by former FCC official Dale Hatfield termed the DOT's Wireless E–911 Initiative as "perhaps the most visible" of all Federal activities related to wireless implementation. USDOT convened key stakeholder representatives from the public safety, communications, and state and local government communities to formulate and initiate actions to accelerate wireless E–911 availability. The Intelligent Transportation Service (ITS) Public Safety Program provides funding support for the Wireless Implementation Program, which provides technical assistance, guidance, and training to accelerate Public Safety Answering Point (PSAP) readiness for wireless E–911.

The National Steering Council reached consensus on a six-point Priority Action Plan:

1. Establish support for statewide coordination, and identify points of contact within each state for each of the stakeholders;
2. Help to convene stakeholders in appropriate 911 regions in order to facilitate more comprehensive, coordinated implementations;
3. Examine cost recovery/funding issues at the state level to determine what is available and whether it is adequate;
4. Initiate a knowledge transfer and outreach program to educate PSAPs, wireless carriers and the public;
5. Develop a coordinated deployment strategy encompassing both rural and urban areas;
6. Implement a model location program.

Implementation of the Plan has begun. A repository for all information and resources, including state implementation models, is soon becoming available through national public safety associations. Resources to help states with the six actions will become available as well.

One statewide success story is the story about Vermont. Vermont has a single statewide E–911 system incorporating wireless and wireline E–911, under a single statewide authority, the Vermont Enhanced 911 Board. Vermont's network is entirely digital, using SS7 from End Offices to Tandems, and ISDN from Tandems to PSAPs. It was designed and built that way from the beginning in anticipation of wireless E–911. Six wireless carriers provide service in Vermont. All have implemented Phase I. Three have implemented Phase II. Two of the remaining three will implement Phase II within the next coming weeks. The deployment was relatively painless in this particular case. Some of the variables that helped in this case include the carriers having one point of contact, in this case, the State office, and didn't have to interface with the nine PSAPs, and the minor CPE upgrades that were needed had already been made.

One statewide frustration story includes that from California. Their hindrance in deploying wireless E–911 has been in getting the right expertise from the right entity—be it the Local Exchange Carrier (LEC), 3rd-part database providers, Wireless Service Providers (WSP's) or the PSAPs. Getting everyone to agree on what the issues are and who is responsible for resolving them within a "reasonable" timeframe has also been an issue. LECs are slow to file appropriate tariffs that would allow the project to move ahead with implementation. One would file, yet the other lags behind. Progress in this particular case becomes tedious versus a "success story". Another example of "we all go, or we don't get there."

APCO, NENA, NASNA, (there is never a shortage of acronyms in government work), the list goes on and on showcasing the associations comprised of people who care and who get the job done. I sit on APCO International's Homeland Security Task Force. Their White Paper and top priorities for 911 and the Public Safety industry include: Radio Spectrum; Interoperability; Planning; Survivability & Redundancy; Security and Personnel & Training. *All* facets of the 911 Center.

This is just the beginning of a process that will be ongoing for some years as we all do our part in ramping up our nation's Homeland Security.

Where Do We Go From Here?

The State of Montana is required to take a leadership role with regard to planning for public safety communications systems used by state, local and federal entities in Montana. Implementing standards and interoperable systems are objectives

that need to be met, as well as integrating radio, 911, and GIS technologies for improved emergency response for the public. Montana, and the nation are challenged to prepare for the impacts of a dramatically changing communications environment. By partnering with state, federal and local public safety and implementing advanced communications technologies, the state has a unique opportunity to not only prepare for the future, but make significant improvements in public safety communications as well.

The public expects and demands high quality 911 service. They expect that no matter where they are, the 911 system is going to work, is going to produce consistent results when they call for assistance, and will obtain the desired response to urgent situations. They expect that the 911 system will work essentially the same way whether they are calling from their home, their business or their car. I do too.

Two weeks ago, Senator Burns addressed the Joint Session of the House and Senate in the State of Montana. He invited me to sit on the House floor and spoke about people taking care of business in Montana. People doing their job every day, 24 hours a day, seamlessly, quietly, below the fold. Then he introduced me as one of the ordinary Montanans, doing extraordinary things. My Grandfather from Oslo, Norway probably smiled, as did my dad in Detroit and my public safety colleagues in California. I am proud to stand among the hard-working citizens of this State and take care of business in this last best place. We'll occasionally peer above the fold and speak to you about our needs, advocating for our bottom line, all in the name of getting the job done.

The State of Montana does not need nor wish to replicate New York, but asks for equal access to the basic systems that are in place for public safety in America. The Public Safety Services Office, in collaboration with local stakeholders, public and private industry, and with your help, will get the job done. I give you my word.

I thank you for your time, your commitment to "doing the right thing" and your support of the public safety community, the *first* first responders, the 911 industry.

Senator BURNS. And thank you. We appreciate your testimony and your interest in this. I know you have been a real Energizer bunny in the State of Montana.

John Melcher.

STATEMENT OF JOHN MELCHER, PRESIDENT, NATIONAL EMERGENCY NUMBER ASSOCIATION

Mr. MELCHER. Good morning, Mr. Chairman, and thank you for the opportunity to appear.

Senator BURNS. Yes, sir.

Mr. MELCHER. You know, looking around the room, we have probably the most august group and best collection of intellect, but I have to remark about your incredible leadership. It reminds me of my family. I was raised in a family of Evangelical preachers, and my grandmother founded and pastored a church in Pasadena, Texas, and a woman in the ministry back in the 1940s and early 1950s was quite a phenomenon, and she taught me early on you can always tell the pioneers by the arrows in their back, and your incredible leadership on this, Senator Burns, I know has brought you a lot of heartache in trying to get what should be a no-brainer accomplished, but the spirit that my grandmother taught me certainly is evident in your efforts, and I applaud and appreciate your help, and looking around the dais, you are truly the last man standing on this issue.

I represent the National Emergency Number Association——

Senator BURNS. You have got to remember, John, I was in the Marine Corps. We did not take any arrows in the back.

[Laughter.]

Mr. MELCHER. Absolutely, Mr. Chairman. Semper Fi.

I am here today representing the National Emergency Number Association as their President and also as Chief Operating Officer

of the Greater Harris County 911 Network, which implements and administers 911 service for the Greater Houston Metropolitan Area, all of Harris and Fort Bend County, some 4.5 million citizens, over 3 million wireline subscribers, almost 1 million wireless subscribers, and having been in public safety for the majority of my life, it is very comforting to know that you are shining a spotlight on what represents, amongst my colleagues here, the body of our life's work, and so this type of awareness is very valuable, and we appreciate that.

However, I think you know that this is not an easy issue. This is full of complexities. It is not rocket science, by any means, but it certainly is full of challenges, and there are hurdles and obstacles that we must overcome.

In our recent assessment through all of our meetings, we have tried to figure out who is to blame and how much to blame, and I am happy to report that there is an abundance of blame, plenty to go around everywhere.

You have heard this morning about PSAP unreadiness. Some of the carriers will talk about how the PSAP's are not ready, and because of the FCC's King County decision, the LEC unreadiness falls in the lap of the PSAP community, and we find that to be almost somewhat disturbing, because we have no control over the local exchange carriers, although we are their customers.

There is also the diversion of funds, which you have referred to as bait and switch, which we think is unacceptable, and very critical to making things happen, but I need to address the PSAP unreadiness issue just briefly, because most of these communities that do have fees in place and are raising the funds to buy this technology were also waiting on a couple of other things to happen.

They were waiting on the carriers to show up at their doorstep with a fee schedule, they were waiting on the LEC's to get their tariffs filed so they knew how much to budget for—imagine yourself trying to deliberate when you were on the county commissioner's court, that you had somebody come to you with an idea, say, you know, I want to deploy Phase II. Well, how much is it going to cost? Well, I do not know. The LEC has not filed their tariff yet, and the wireless carriers have not told me how much it is going to cost, but we are building up a savings account, let me deploy. You would never allow that.

So as these funds were being built up, waiting on these things that have just in the last few months started to happen, now we find that we are ready with the technology, we are ready with the tariffs, and we are ready with our upgrades, and there is no money to commit to either of these things, so it is a very, very critical issue that must be addressed.

Wireless technology, as Tom Wheeler once said, we wrestle the laws of physics to the ground. This is no longer a technological issue. As a matter of fact, Mr. Chairman, I would submit to you that this is an issue of political will and funding, and where the former is present, certainly the latter will follow.

There are successes. We are about solutions today. I do not want to cry over spilled milk, because there are successes out there. We need to maintain constant vigilance, but I come from an area that has successes. All six of our carriers are deployed. We are doing in-

credible things in St. Clair County, Illinois, as Representative Shimkus said, and other areas, the State of Rhode Island, my friend David Jones in Spartanburg, South Carolina, systems are up and running and saving lives today. In Tarrant County, Texas, we had an officer whose life was saved because they were able to pinpoint his location when he slid off the ice.

Not only is basic 911 so valuable, and not only do we have Enhanced-911 that is starting to see successes in over 300 instances in the country today, but we are even seeing beyond 911. I have behind me, I brought with me my guest, Officer Chris Murray, if he would stand. I would like for you to recognize him. He is proof positive that technologies above and beyond Enhanced-911 are possible.

Officer Murray in December flipped his patrol car, and it was one of those, some 500 patrol cars in the Houston area that are equipped with automatic crash detection technology, and that box was able to call for help, the safety center was able to conference up the 911 center in Pasadena on a 911 trunk, and all of that crash-related data showed up on the 911 call-taker's screen. They were able to respond in less than a minute, and although he was unconscious, unable to respond, they were able to locate him. He is proof positive, and we have others proof positive this is doable. It is a matter of political will, and it is a matter of consensus-building and bringing the parties together.

I applaud the Federal Communications Commission for hanging a target on the wall. It was a very troubling time, as my colleague, Ms. Bradshaw, will attest to, when we all came together with a lot of uncertainties and a lot of unanswered questions, but with a lot of courage and a lot of faith, that this was doable. The FCC adopted what was the consensus agreement that was developed by public safety and the wireless industry, which my colleague signed on behalf of NENA, when she was president.

Now that we have got a few years under our belt and some experience, we know that there are some obstacles and some hurdles that we did not anticipate. We need to make sure the LEC's are onboard. We need to make sure the carriers are onboard. We need to make sure the public safety's onboard, but we also need to make sure that everybody is funded and can execute their jobs with the adequate funding that they need to make sure their costs are recovered.

This represents, wireless 911 represents what is a shift, a fundamental shift in public policy and the mindset and expectation level of our citizens. 911 is no longer a local issue, Mr. Chairman. It is now a global issue, as you well understand, and we have to address it as a global issue and stop supporting a patchwork that does not work any more. It is broken. The technology is not interoperable, and the funding is not right. We need to fix those things.

We are hard at work. It is not like we have been sitting around waiting for the sun to shine on us. Through efforts of, like Ms. Bradshaw, the Public Safety Foundation of America is raising money to distribute to PSAP's to try to bring planning and even equipment purchases to light in so many of these areas that are so inadequately, woefully underfunded. There is the NENA and ATIS partnership. You have got testimony submitted by the Presi-

dent of ATIS, Susan Miller, attesting to the ESIF forum, the Emergency Services Interconnect Forum, setting standards in PSAP readiness and checklists and the like.

There is Secretary Mineta's DOT Secretarial Initiative, on which many of us serve, that are trying to bring solutions, and, of course, thanks to your leadership and that of your peers, we now have the E–911 Caucus that was launched last week, and which we think is an incredibly valuable tool in helping bring solutions to us, but mainly raising public awareness to help us in our efforts.

The NENA organization recently formed what we are calling the NENA SWAT team, the Strategic Wireless Action Team, and that is a three-level endeavor. We have the subject matter experts from all parts of industry, and NENA is very unique in this, because the pillars of our association membership are the carriers, wireless and wireline carriers, the third-party service providers and equipment vendors, and, of course, the public safety folks who implement and administer these systems.

The SWAT team is broken up into four disciplines. There are the technical folks who are figuring out the spreadsheet. Your colleagues this morning have asked, how much is this going to cost, and how long is it going to take? Well, our technical folks, my techie buddies, the propeller-heads, as we like to refer to them, are coming up with those spreadsheets, and we are actually going to give you real hard-dollar figures as to what it is going to take to make our networks talk to each other and to make this technology a reality for all Americans.

We have the operations team, because you can invent gold, but unless you can show your colleagues how to implement it, it is of very little value.

And then, of course, the policy and finance teams, and you are going to see participation at the highest levels in creating solutions for policy and finance.

This leads to constituent roundtables, which are the senior executives of all of the carriers and the public safety community who will advise the CEOs, and this will culminate in a CEO summit in early June. That CEO summit will be a true consensus arrangement that will present a document, an action plan document to you, Mr. Chairman, and this committee, to the members of the Federal Communications Commission and their chairman, and to all the State legislative officials who are responsible for making things happen in their State. It is all about solutions.

We shared with you once before that if we just were able to get the collective intellect together in the same room at the same time, no problem was too large to solve, and we are proving that now through the NENA SWAT initiative, and our hat is off to our colleagues who are helping us, but some are slow to the table, Mr. Chairman, and those are going to need the political might and the political will of gentlemen such as yourself to make them understand the importance and the value of participation.

It is all about making this happen, coming together for a common cause, because the bottom line on everything that we are doing is the salvation of lives and property. We want to make sure that no instances like you have heard of this morning occur ever

again where we can stop it and help it, and we want to make sure that this is done in a very timely and fiscally responsible fashion.

Mr. Chairman, I thank you so much for your time, your effort, and your grace and your wisdom, because you have truly been a friend to public safety, and I am here to let you know that there will always be a John Melcher in your conscience somewhere.

[The prepared statement of Mr. Melcher follows:]

PREPARED STATEMENT OF JOHN MELCHER, PRESIDENT, NATIONAL EMERGENCY NUMBER ASSOCIATION

Mr. Chairman, members of the Committee, Senator Burns, thank you very much for providing me with this opportunity to appear before you today. My name is John Melcher, and I serve as the President of the National Emergency Number Association (NENA) and as the Deputy Executive Director of the Greater Harris County [Texas] 911 Emergency Network.

Acknowledgements and Appreciation

Before we get started, allow me to extend a special thank you to the Committee and the United States Senate for all your individual and collective efforts and leadership on these critical issues. Mr. Chairman, I would especially like to thank you (Senator Conrad Burns) for your commitment to 911 in the Committee, Congress and throughout the nation. In 1999, you sponsored the Wireless Communications and Public Safety Act, an important roadmap for improving emergency communications, and specifically for deploying wireless E–911. As a member of the United States Senate and Chair of the Subcommittee on Communications you have furthered the education of your colleagues and constituents. Most recently, you led the formation and creation of the Congressional E–911 Caucus, a bi-partisan, bi-cameral caucus to advance the issues, education and discussion of enhanced 911 services. In these many efforts, you have been a passionate supporter of technology, communications, first responders and 911. I extend my personal gratitude and thanks of the 911 industry and nation for your work and dedication.

Additionally, I would like to thank Senator Burns' colleagues in the United States Congress and the co-chairs of the Congressional E–911 Caucus, Senator Hillary Rodham Clinton and Representatives Anna Eshoo and John Shimkus.

Thanks also to my fellow panelists from the Federal Communications Commission (FCC), Commissioners Abernathy and Adelstein; New York Assemblyman David Koon; Ms. Thera Bradshaw of the Association of Public Safety Communications Officials International (APCO); Mr. Mark Tuller of Verizon Wireless; Mr. Mike Amarosa of TruePosition; and Ms. Jenny Hansen of Montana, all of whom we continue to work closely with on these important issues.

The Voice of 911

Serving more than 7,000 members nationally, NENA represents the nation's very best in 911. Our membership consists of fire, emergency medical services (EMS), law enforcement, private vendors, industry and 911 officials throughout the nation—all professionals, dedicated to advancing the use of 911 for all emergencies, citizens and communications devices. This membership is important because it collectively and uniquely represents the technical, operational and policy foundation and expertise to make 911 work like it should. It also represents the decision makers, stakeholders and leaders of 911 reaching into the disciplines of telecommunications (both wireline and wireless), public safety, and third party service providers. A broad foundation of public and private service providers, NENA is truly *the* "Voice of 911."

Having been involved in the 911 industry for well over two decades—from a dispatcher, to a paramedic, to my current position as chief operating officer—I have personally participated in the many stages of implementation and deployment of E–911. From the inception of new technology to the detail and complexity of public policy, I can personally attest that the focus of this hearing is truly important. It recognizes that E–911 implementation requires a partnership, a sequencing of leadership and a commitment of all parties to work together in a coordinated way to overcome barriers and challenges. It also recognizes the critical need to move forward as quickly as possible, and the opportunity to ensure that the American public receives the very best in calling 911 from any communication device, at any time, anywhere.

E–911 implementation is a complex and challenging process. While there is much to applaud in the many broad-based efforts to implement E–911, the goal of E–911

"anywhere and everywhere" remains elusive. Homeland security issues, and the continuing reminders of the essential role E–911 plays in our public safety, emphasize the need to move past the rhetoric and truly address the systemic issues of E–911 implementation.

Technology and Public Safety Answering Point (PSAP) Readiness

The deployment of E–911 services, coupled with new technologies, has dramatically improved personal safety and security and given new promise to what is possible. What was once a dream is now a reality in places like St. Clair and Bond County, Illinois; Spartanburg, South Carolina; Tarrant and Harris County, Texas and the State of Rhode Island, just to name a few.

In these jurisdictions, wireless 911 callers are being located, new technologies are being introduced, lives and resources are being saved.

Just last Wednesday (February 26, 2003), Euless, Texas Police Corporal Mike Privitt, was saved by the newly-deployed wireless E–911 system in Tarrant County, Texas. Driving home after working the nightshift, his truck hit a patch of ice, causing it to roll over several times down a deep embankment. Dazed and confused as his pickup lay upside down in a remote area, Privitt had no idea where he was. He called 911 from his wireless phone. Receiving the call in Tarrant County, Sergeant Jeromie Penrod was able to use the E–911 information to locate Corporal Privitt in a matter of seconds. Rescuers arrived just minutes later. Resources were saved and tragedy averted.

Another shining example of technology and E–911 is here with me today in the gallery Officer Chris Murray of the Pasadena, Texas Police Department. Officer Murray's life has returned to normal after a potentially fatal accident, thanks to the deployment of E–911, Automatic Crash Notification (ACN) life saving technologies.

Two days after Christmas, on the evening of December 27, 2002, Officer Murray was returning to the station after completion of his patrol duties. Driving his police cruiser, which was recently outfitted with a prototype telematics crash detection module, he temporarily lost control of his vehicle and veered off the roadway. Attempting to correct his slide, he turned his vehicle back on to the roadway, but the speed of the vehicle along with slippery conditions made it impossible for him to gain full control. Instantly he was catapulted across the roadway, nose-diving into a drainage ditch, flipping the vehicle, smashing into a utility pole and finally coming to rest upside down on the roadway. Unconscious, inverted and trapped, Officer Murray lay waiting for help to arrive.

Previous to impact, Officer Murray had been in radio contact with his patrol dispatchers. From the dispatcher perspective, it was obvious that something had gone terribly wrong. Officer Murray wasn't responding on his radio. However, the recently deployed telematics crash detection module was. Within seconds of the incident, detailed information providing the exact location of the event, the point of impact, along with an open communications channel was shared on *the* 911 network infrastructure with the PSAP receiving all the relevant data on the calltaker's screen. The Life Flight team was immediately dispatched. Flown to the Trauma Center at Houston's Hermann Hospital, Officer Murray remained in and out of consciousness for several hours. After regaining consciousness several hours later, the doctors said that it was the speed of finding him and getting him to the hospital that prevented serious injuries.

All this was possible because Officer Murray's vehicle had been equipped with life-saving technology and the 911 network was able to receive and share detailed location and critical crash information with multiple responders.

Recognizing the power of such technologies and the communications networks to provide emergency services, the FCC recently sought comment on a notice of proposed rulemaking, asking whether its regulations on access to emergency service communications networks and systems should be expanded to address a variety of other devices and services, including mobile satellite service ("MSS"), telematics (in-vehicle) services, multi-line telephone systems ("MLTS"), resold cellular and PCS services; pre-paid calling services; "disposable" phones; automated maritime telecommunications systems ("AMTS"); and "emerging voice services and devices." As the leading 911 constituency, expert and advocate, NENA applauds the Commission's leadership in seeking comment on these critical services and taking a proactive stance on emergency services. It is essential that we begin to anticipate change in the way people communicate and the potential impact that these changes will have on access to emergency services. We can and should be proactive in addressing the impact on future technologies and systems, instead of dealing with the impact of change once it has occurred—always looking back, or, like Alice in Wonderland, running as hard as we can to stay in the same place.

Preparing for the future, NENA's Future Path Plan is integrating the growing variety of non-traditional ways to access 911 by adding components and functions to the overall 911 system to ensure that new methods of access are more effective, more dependable, and more economical than what we have, or than other alternatives. This technical plan for future 911 systems is providing a long-term direction for development to support new call sources and needs. In this, change can be as much an opportunity as it is a challenge.

One of the barriers most often cited by wireless carriers is the issue of "PSAP readiness" and the FCC-required implementation timeframes that affect the timing and pace of deployment.

While it's true that there are PSAPs that are not "ready," there are a growing number that are. It should also be emphasized that PSAP readiness is not just a direct PSAP concern. E–911 implementation depends upon the timely and coordinated production and availability of Phase II capable handsets, other location technology, appropriate network infrastructure upgrades, PSAP support technologies and other technical enhancements.

Product development and infrastructure upgrades presumably depend upon timely orders from customers, and those, in turn, on a willingness and understanding of the supplier of what is expected and what is needed in project management expertise. In the interest of emergency services for wireless customers and the public in general, best efforts by all parties should always be the expectation. Sadly this is often not the case, and in some instances we are confronted with a conspicuous absence of engagement.

Ultimately wireless 911 calls must be routed to a PSAP on the network infrastructure of a landline telephone company. This "911 System Service Provider" is usually an incumbent local exchange telephone company (ILEC). A critical stakeholder in the process, ILEC's have been for the most part absent from both the original planning and FCC rule making on this subject. Subsequent regulatory actions have considered the ILEC simply a vendor to the PSAP, in spite of their central position in the interconnection/interface complexities uniquely brought to the table in wireless E–911. This is untenable to the public safety community and dangerous to the wireless calling community.

In this environment, PSAP readiness is more of an issue of leadership. It requires productive, timely and efficient relationships between the wireless carrier, ILEC and PSAP, along with other third-party vendors and decision makers. Constant communications between the parties, project management, and forecasting of needs are critical. Landline trunking must be ordered and provisioned, technical interface issues addressed, and overlapping database functions coordinated. And, finally, much of this must occur within a diverse and complicated regulatory environment, and it needs to be paid for. If all of this doesn't work well, the pace of deployment can be materially impacted.

I understand that sometimes public policy, presenting distinctive and beneficial public goals, may complicate and sometimes compete with legislation, and implementing rules and regulations. An example of this are LATA boundaries, which have been used to divide local from long-distance service. These are important to the way service providers compete with each other, but they also complicate the timely and cost effective provision of 911 service. Perhaps a balancing of both objectives is the best answer here.

Without a doubt, it's easy to point fingers and lay blame, but all parties can and should agree that PSAP readiness is an issue that reaches beyond the bricks and mortar of the PSAP. *It's a systemic issue for all parties to address in a sense of common purpose, the public interest, frequent communications and cooperative spirit.*

Resources and Funding

Closely linked to the issues of technology and PSAP readiness is the availability of sustained resources and funding to deploy wireless E–911.

FCC Docket 94–102, requires that wireless carriers provide location information from wireless phones by December 31, 2005 in any case where a valid PSAP request has been received. In order to do so, many PSAPs require sustained resources to be able to first accept, and then process Automatic Number Identification and Automatic Location Information (ANI/ALI) from wireless phones, through upgrades of technology and recovery of basic costs. Unfortunately, in far too many of our nation's communities, these E–911 needs are not being met simply because *911 funds and resources are not being allocated for 911 use.*

The costs of maintaining and operating a 911 system are significant and necessary. Technical, operational and financial resources are required from both the public and private sector. Reliability, redundancy, innovations and challenges in modern communications are constantly re-defining 911 costs and economies of scale.

Funding our nation's 911 system is not only a challenge in today's world, but also a necessity to enhancing all emergency systems in the future.

In the days of the Bell monopoly many of these costs were included in a consumer's basic service. Early 911 cost recovery mechanisms consisted of costs being passed on directly to the consumer in the form of surcharges and fees on phone bills. Understanding that 911 is a benefit to the public as a whole, these fees and surcharges were used for direct 911 expenditures for both the public and private sector.

Training of dispatchers and turnover of highly skilled employees remains a challenge and obstacle for most PSAPs. Tight budgets and scarce resources make it that much more difficult to retain highly skilled employees. New technologies require more focus on education and training, while simultaneously creating a more skilled work force that requires additional resources for wages, training and employee retention. Dispatchers and call takers are dedicated public servants, but they need resources and skills to appropriately answer the call for help.

As new communications technologies emerged, such as mobile telephony, surcharges were adopted for wireless phone bills to pay for 911 services. Today, there are approximately 40 states in the U.S. that currently collect a surcharge for E–911 from wireless phone customers. All too often these monies sit idle. Not for lack of PSAP need, but rather waiting for pricing from LEC tariffs, wireless carrier requirements or other local priorities. Caught in the middle, PSAPs are torn between making request for services that haven't been priced or simply not requesting E–911.

Instead of paying to develop and deploy E–911, these monies are being spent on other government needs that may or may not pertain to 911. Accruing large sums of money in short periods of time, these funds are being reallocated to other purposes within the general fund or simply lost in the appropriations process altogether.

Boosting revenues for strained government budgets and programs, 911 funding has become an easy target. Subsequently, without appropriate funding and resources our 911 systems become antiquated, obsolete and unable to handle new communications technologies being used by the public. This results in missed deadlines, under-funded systems or no deployments at all.

While I'm not questioning the right of state legislators to make critical public policy decisions regarding their budgetary needs, this alarming trend is, at best, slowing our progress towards truly universal 911 service, and, at worst, outright endangering its implementation. The nature of emergency services will always be local but the access to those services is a national expectation.

Protecting and investing 911 monies for 911 purposes is a principle and policy agenda that we can and should all agree on.

Solutions, Emergency Services Interconnection Forum (ESIF) and NENA's Strategic Wireless Action Team (SWAT)

Since the adoption of the Consensus Agreement in 1996 between the wireless industry and public safety, much has been made of finding solutions to specific technologies, funding obstacles and regulatory barriers. And in the years that have followed, we have seen leaders and opportunities rise to the occasion.

Members of this body (United States Senate) took it upon themselves to establish a framework for implementation by passing the Wireless Communication and Public Safety Act of 1999. Landmark legislation for public safety and 911, the Act identifies a need and challenge of national leadership by designating 911 as *the* universal emergency telephone number for wireline and wireless phones. Four years later, as I've noted, the Act still stands as a shining example of leadership and commitment to our nation's emergency communications system.

As the chief regulatory body, the FCC has demonstrated a commitment to the Consensus Agreement and a willingness to inquire by commissioning the Hatfield report to better understand the technical roles and responsibilities of the many parties that are required for E–911 deployments. We applauded and praised the FCC and Mr. Hatfield for such a thorough report and analysis of wireless E–911 and see it as an important roadmap for the technical challenges that lie ahead.

Likewise we have worked with our fellow public safety organizations to support activities such as APCO's Project Locate and the Public Safety Foundation of America, which provides grants to expedite the implementation of E–911. Similarly, we have worked and supported a joint project with the United States Department of Transportation (USDOT) Wireless Implementation Program. In this effort, NENA has taken the lead to survey State and County 911 coordinators and provide national information on readiness of states, counties and PSAPs for wireless E–911.

Of special note, working with the Alliance of Telecommunications Industry Solutions (ATIS), NENA co-convened the Emergency Services Interconnection Forum

(ESIF) to help provide a venue for the telecommunications industry, public safety and other stakeholders to develop and refine technical and operational interconnection issues critical to this process. ESIF allows many different telecommunication entities to fully cooperate and interconnect with each other in order to determine the best practices and solutions necessary to deploy E–911 services. (Please refer to the testimony of Susan Miller, President of ATIS to learn about this substantive effort being coordinated by NENA and ATIS).

Each and every one of these activities has been an important stepping stone to better understand the nature of the problem and advance the issues of wireless E–911. Much of what we have accomplished thus far in E–911 would not be possible if not for the dedication, perspiration and leadership of the many experts in private industry, government and 911 in these aforementioned activities.

Understanding that we as a nation and community are still at a crossroads of implementation, and that specific institutional barriers exist in technology, PSAP readiness and the funding of our nation's 911 system, we have launched the Strategic Wireless Action Team (SWAT), to examine and address the global and systemic challenges affecting E–911 deployment.

In this process, NENA has proactively convened national leaders and technical and operational experts to identify priorities, and determine the changes needed to improve our nation's 911 system. Specifically, this initiative brings together all the relevant constituents—wireless and wireline telecommunications companies, state and local organizations, and the nation's leading Public Safety groups: NENA, APCO and NASNA—in a cooperative effort to address—*and resolve*—the critical barriers to ubiquitous E–911 deployment. Supporting third-party objectivity, this effort is being organized and facilitated with support from the Monitor Group, a preeminent international strategy advisory firm; Giuliani Partners, and the PSAP Readiness Fund.

Focused on systemic solutions and results-based outcomes, SWAT is interjecting new dialogue, energy, and resources where others have exhausted, given resources, time, or expertise. Moreover, SWAT is recognizing the necessity for a comprehensive public/private cooperative effort to address the many issues that are affecting the 911 system—one dealing with solutions, not barriers and contention.

Today we are faced with an aging 911 network in an era when the public demand for cutting-edge communications tools reaches from the schoolhouse to corporate offices to the home, in order to function throughout the community. While the nation's 911 service providers struggle with deploying location technology for wireless telephone sets, some parts of the country do not even have basic 911. As segments of our community rely more on two-way messaging devices, automatic crash notification service, etc., NENA's SWAT recognizes that the 911 system must be modernized to accommodate emerging technologies and interconnected to accommodate the transfer of digital information across the country. More than anything, SWAT is an approach to resolve the coordination and funding issues systemically by increasing the alignment of all critical stakeholders involved in deploying E–911.

SWAT is an opportunity to do it right: Organize leaders on a national level; get the right experts in a room; apply appropriate resources and guidance; and identify technologies, tools, and expertise needed to assure the consistent delivery of 911 systems throughout the U.S. SWAT is designed to look at the components of wireless E–911, along with the environment in which it operates, and identify and deploy the kind of focused resources necessary to truly foster wireless deployment. It's about getting the right people and, the right information to solve wireless E–911 problems.

The initiative is representing an approach premised on the need to bring all involved parties to the process and to craft a comprehensive recommendation—by June of this year—which overcomes the myriad E–911 logjams in place today. It is examining the economic, technological, operational, policy and political implications of potential E–911 solutions to balance multiple private interests with public policy goals, and develop a recommendation that all parties can support. The initiative culminates in a consensus plan to be announced late this spring.

Very much a work in progress, in a relatively short timeframe, SWAT has yielded positive results and a candid dialogue along with a renewed commitment to the deployment of wireless E–911. Proactive and consensus driven—SWAT recognizes that we can't afford to address E–911 issues in a contentious and litigious approach, but that we must work together to implement this critical services as quickly as we can.

A critical mass of public safety advocates and leaders, wireline E–911 system service providers and wireless companies—and their respective CEOs—have already committed their ongoing support to this initiative. Some have yet to come to the table, but the opportunity remains: build a better 911 system for all enhanced services, devices and communications.

Final Thoughts

Like all partnerships, we have had our ups and downs and fair share of trying times and difficult moments. There have been finger pointing, squabbles over resources and, of course, spin. The sandbox hasn't always been productive and pleasant. I am here today to move past that. We've got a job to do. It's about solutions, progress and implementation, and to the extent that barriers exist, we must work together in a committed and coordinated way to overcome them. We must find and support solutions and move past rhetoric and sound bites.

As the National President of the National Emergency Number Association, I am tasked with facilitating a discussion that responds to the systemic issues of 911. I'm also asked to work collaboratively to form solutions. But in the end it comes to one simple goal. It's about saving lives, protecting property and ensuring the security for all Americans.

I thank you for your leadership and the opportunity to work with all of you in advancing the implementation of E–911.

POLICE VEHICLE AUTOMATIC CRASH NOTIFICATION SUMMARY

Accident Scenario

On December 27, 2002 at 10:25 p.m. CST Officer Chris A. Murray of the Pasadena, Texas Police Department was returning to his reporting sub-station after completion of his patrol duties. He was northbound on Red Bluff road in Pasadena, Texas when he temporarily lost control of his vehicle causing him to leave the roadway into the west center median of the roadway. Quickly correcting his slide into the median's drainage ditch, he turned his vehicle back onto the roadway but the speed of the vehicle coupled with slippery conditions prevented him from gaining full control. His vehicle catapulted across the roadway eastbound and nose-dived into a drainage ditch located parallel to the roadway on the east side. The vehicle flipped on end with the rear of the vehicle moving upwards. As it flipped, the vehicle's roof smashed into a utility pole installed on the side of the canal. This impact then caused the vehicle to be thrown back onto the roadway eventually coming to rest on its roof and trapping the unconscious patrolman in his seat.

Fortunately Patrolman Murray had been in radio contact with his patrol dispatchers when the crash occurred. Dispatchers quickly assessed the situation and were able to send immediate emergency help to his crash location. Emergency responders found the officer trapped and unconscious in the car. Extricating him and fearing major head trauma due to his unconscious state, they called for Life Flight. He was then flown to the Trauma Center at Houston's Hermann Hospital. In and out of consciousness for several hours, he was treated for physical injuries that included a dislocated shoulder. After 20 hours of close observation Officer Murray was released from the hospital.

First Ever Automatic Crash Notification (ACN) Service Application

Officer Murray's vehicle was one of 500 police vehicles in the Texas Harris and Fort Bend county areas equipped with a Prototype Telematics Crash Detection Module (CDM) and Sensors. *The vehicles are being used in support of a First in the Nation long term Automatic Crash Notification (ACN) analysis project involving Greater Harris County 911 Emergency Network (GHC) and Ford Motor Company.*

Immediately detecting its vehicle's crash, the CDM senses and captures vital crash, location, vehicle and occupant data. It communicates within seconds with Ford's roadside Telematics Service Provider, Cross Country Automotive Services (CCAS), and transmits all ACN data in a compressed data pulse format. Simultaneously, a voice channel link is also established to vehicle occupants with CCAS emergency call attendants. Via newly developed network elements for this project, CCAS also immediately receives, within seconds, 911 telephone routing information from servers and databases of INTRADO, GHC's 911 database contractor. Using GPS latitude and longitude (X,Y) coordinates transmitted by the vehicle's CDM, INTRADO's Call Routing Databases pinpoint the closest 911 Public Safety Answering Point (PSAP) to the vehicle in crisis. Telephone routing information is then passed back to CCAS for use in conferencing in PSAP 911 call takers. *This is the first ever use of the Native 911 Network Infrastructure to connect and pass emergency information from Telematics Service Providers such as CCAS directly to 911 responding centers.* INTRADO's database servers also immediately display pertinent data elements received from the CDM on the PSAP call taker's computer monitor along with vehicle information such as car model, year, plate number, color, owner, etc. received from CCAS profile database systems. Using the X, Y elements from GPS, PSAP monitors also paint Map Displays indicating where the accident took

place. Detection of the crash, data compilation and establishment of all communications links for transference of voice and data information to all responders regularly occurs within 30 to 60 seconds.

Pasadena Accident ACN Data Compilation and Analysis

Compilation of ACN data from Officer Murray's vehicle indicates that its CDM detected the accident at 10:25:17 CST on 12/27/02. Data was transmitted to CCAS from the vehicle and voice communications was established within 22 seconds although Officer Murray could not respond due to being unconscious. Noting the severity of the crash and receiving no response from the occupant, CCAS call attendants immediately contacted the Pasadena, TX 911 PSAP establishing 3 way communications within 10 seconds via the newly developed ACN networks. Vital vehicle and crash information including street name and coordinate information was passed to the PSAP call taker both by voice and in data displays. See Attachments 1 and 2. CCAS call takers were then informed by 911 PSAP responders that they were aware of the accident due to the dispatcher communications with the vehicle just a few seconds earlier. The PSAP following normal procedure dropped communications with CCAS attendants at this time. CCAS call takers maintained communications with the vehicle until emergency sirens were heard arriving at the crash site and responders assisting the driver. *Total communications time from time of the crash to informing 911 PSAP call takers was less then 35 seconds.*

Analysis by Ford Motor engineers of crash pulse data from the vehicle's CDM closely parallels driver observations and accident investigators' accounts of what occurred during the crash. Crash pulse analysis (Attachment 3) indicated a violent lateral movement as the vehicle hurled into the east side ditch at an angle but still impacting almost head first into the canal (Attachment 4). The CDM's accelerometer also measured a severe impact on a vertical plane as the roof hit the utility pole (Attachment 5). Next it measured a lesser impact as the vehicle landed on the passenger side back in the road (Attachments 6 & 7) and eventually noted the rollover and final roof resting position of the vehicle (Attachment 8). *GPS coordinate information from the CDM (lat. 29.64504 long. -95.11654) measured the vehicle's exact location allowing CCAS and PSAP Map Databases to identify the road as Red Bluff Road in Pasadena, TX. CDM speed and occupant sensor data correlated driver's observations. Vehicle profile identification information was exact.*

Conclusion

Several months of data analysis from both test vehicles and actual crash incidents has proven the efficacy of GHC's ACN service introduction in Harris and Fort Bend Counties. *In Officer Murray's case, had he not been in communication with his dispatcher, ACN provided the venue for dispatching immediate help to the exact accident location within seconds of its occurrence.* ACN significantly reduces current response times in vehicle crash emergencies.

CCAS Screen Display **Attachment 1**

CCG ITS - Galileo ->Case #: 0301886180 ->FMC/Ford

Caller: FMC PASADENA PD (713) 477-1221

Print Scr | Goodbye | Customer Profile | Allow Dropped Call | Retrieve | Terminate | Map | Mayday | Vehicle Status | Text Messaging

Enrollment | Edit Customer

Mayday | Forget | ESP Locator | Close

Nature Of Emergency

F5 Accident | F6 Medical | F7 Robbery | F8 Fire | F9 Silent | No Emergency

Location

Lat: 29.64504 Long: -95.11654

Street: RED BLUFF ROAD

Cross Str:

Landmark:

City: PASADENA

State: TX Zip: 77507

Get Lat/Long | Get Address | Format

Vehicle

Year: 2000 Make: FORD Model: CROWN

Color: WHITE State: TX Plate: 772-451

VIN: 131005 Phone ( ) -

Caller

First Name: FMC

Last Name: PASADENA PD

Phone: (713) 477-1221

Primary Rep

Name: ITS MAYDAY Ext: 34713 Id: csv1058

Comments:

Secondary Rep

Page

Comments:

ESP

Reject | Dial | Transfer ESP | (ETA = 0) | Set To Now

To Caller:

Ford Safety. Do you require police, fire or medical emergency services?

<< Back | Continue>>

Device Type: INTEGRATED

Enhanced Crash Notification

Start | Reflection X - (Untitled) | CCG ITS - Galileo ->C... | Document1 - Microsoft Word | 10:37 AM

Attachment 2

PSAP Display

ANI	Duration	Call Reference Number
2815119892	00:00:44	1090501

ALI:
RawALI:
106
01-000 ESN=288 006
(800) 824-6678 22:27 12/27/2002

000-0000 TSP

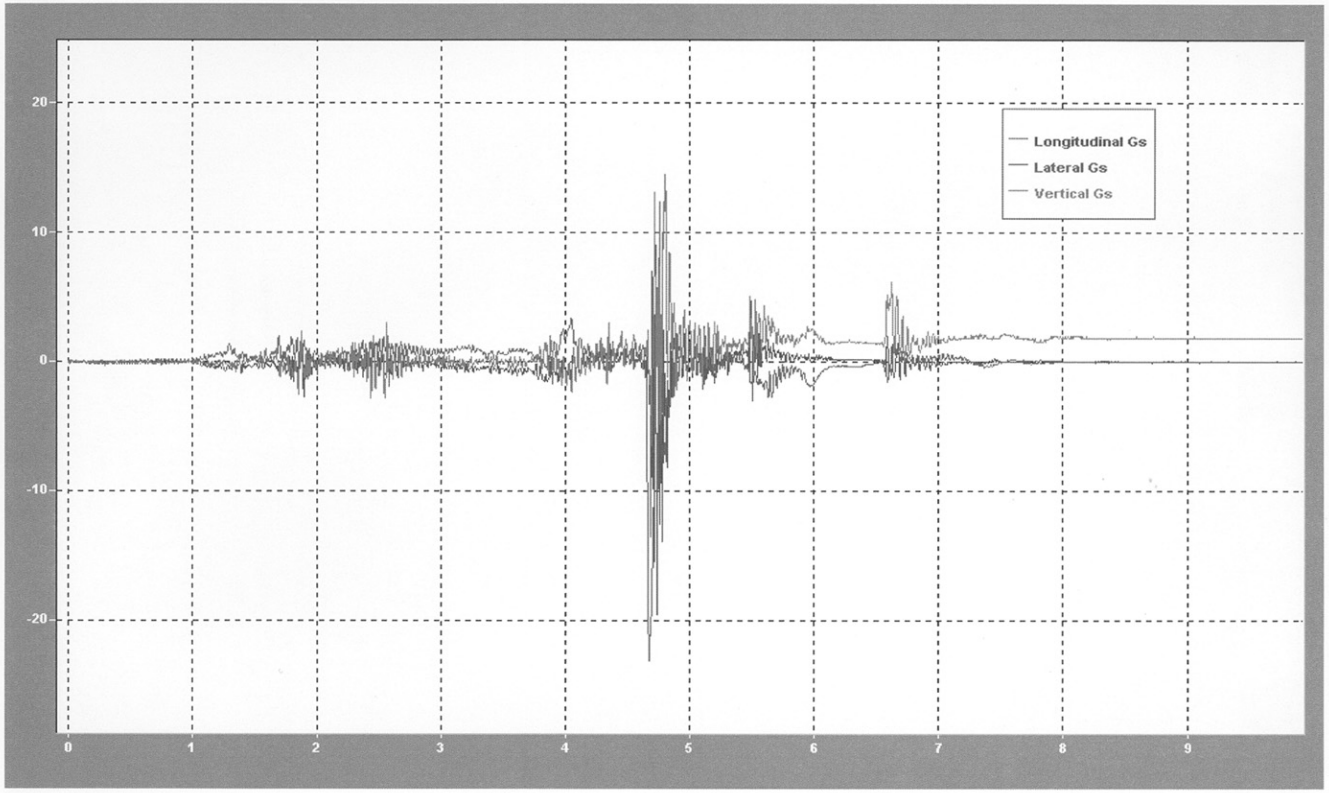
Cross Country Automotive Svcs
ALT#= TELCO=CCAS
X=-095.116539 CNF=00100
Y=+029.645041 S=000 D=000

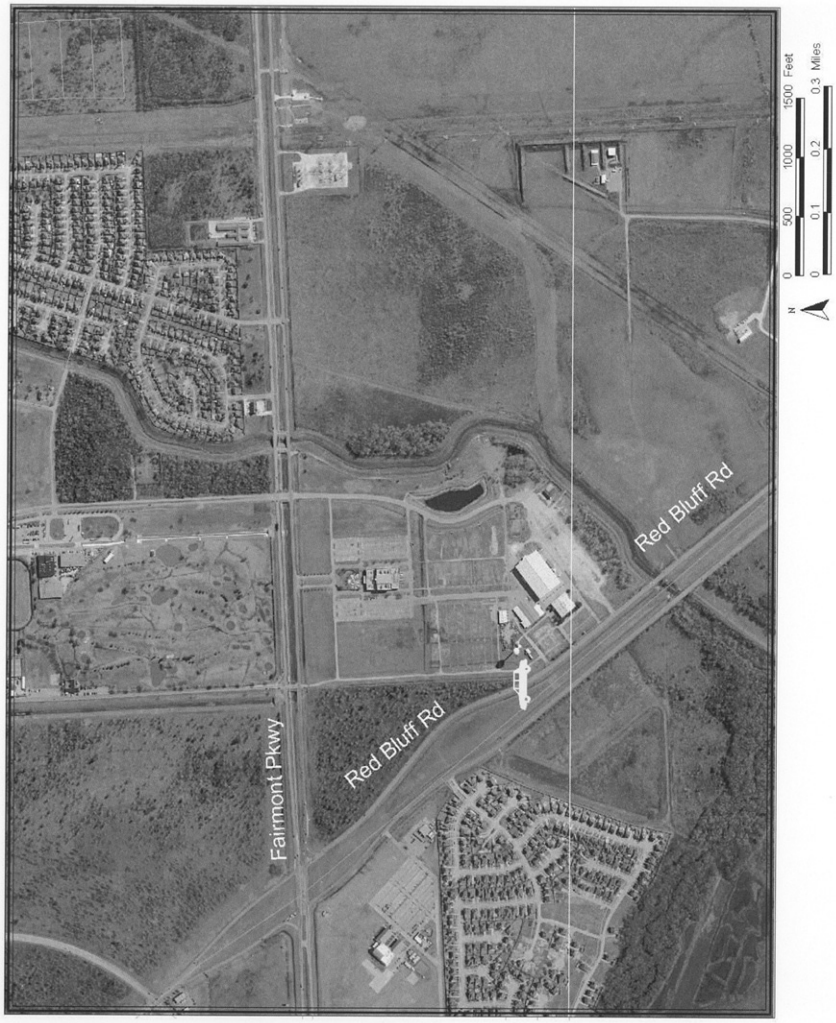
VERIFY
VERIFY
VERIFY
ID=0010006542 ORNT=Roof
MAKE=FORD MDL=CROWN VICT
COL=WHITE HDG=355 ROLL=Y
SPD=047 DELV=44 FRCE=09 OCC=00

	Event Info		Event Times		Agents, Consoles & Buttons			
	Event	Length	Start	End	First Name	Last Name	Console	Transfer Button
▶	Ring	00:00:06	12/27/0 10:25:3 PM	12/27/0 10:25:4 PM	Agent6	Agent6	911 Position 6	
	Talk	00:00:05	12/27/0 10:25:4 PM	12/27/0 10:25:5 PM	Agent6	Agent6	911 Position 6	
	Hold	00:00:13	12/27/0 10:25:4 PM	12/27/0 10:25:5 PM	Agent6	Agent6	911 Position 2	
	Talk	00:00:25	12/27/0 10:25:5 PM	12/27/0 10:26:2 PM	Agent6	Agent6	911 Position 2	

Crash Pulse

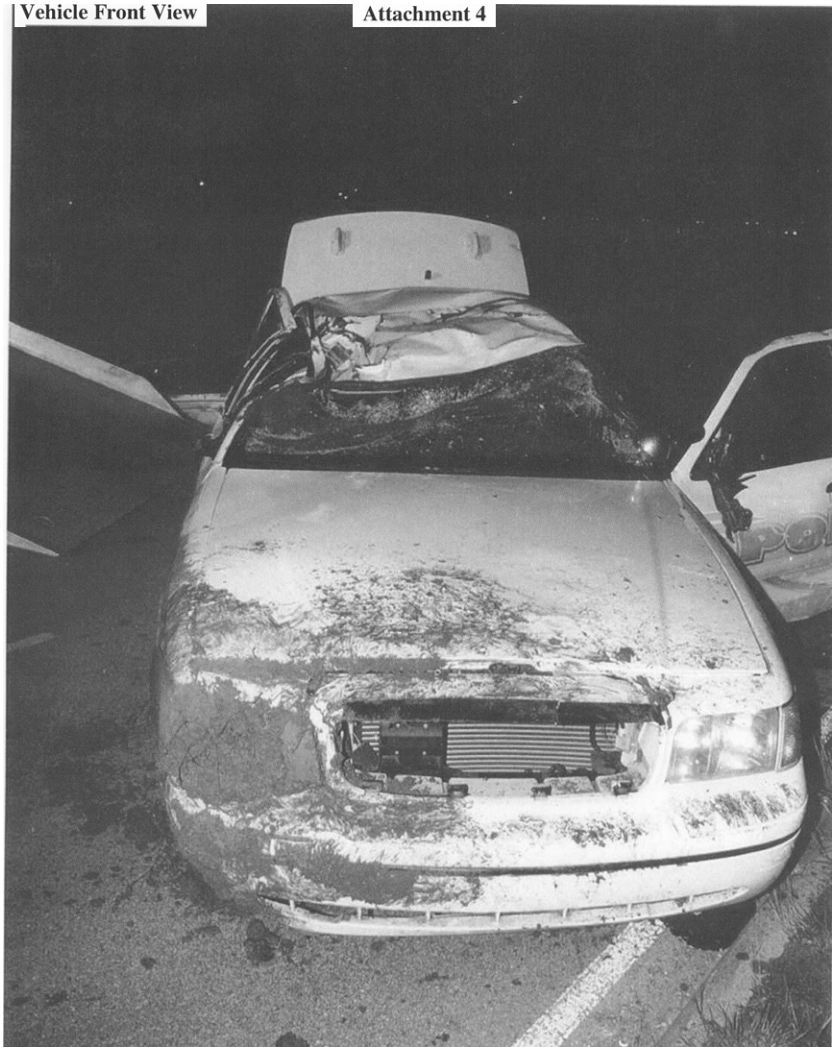
Attachment 3



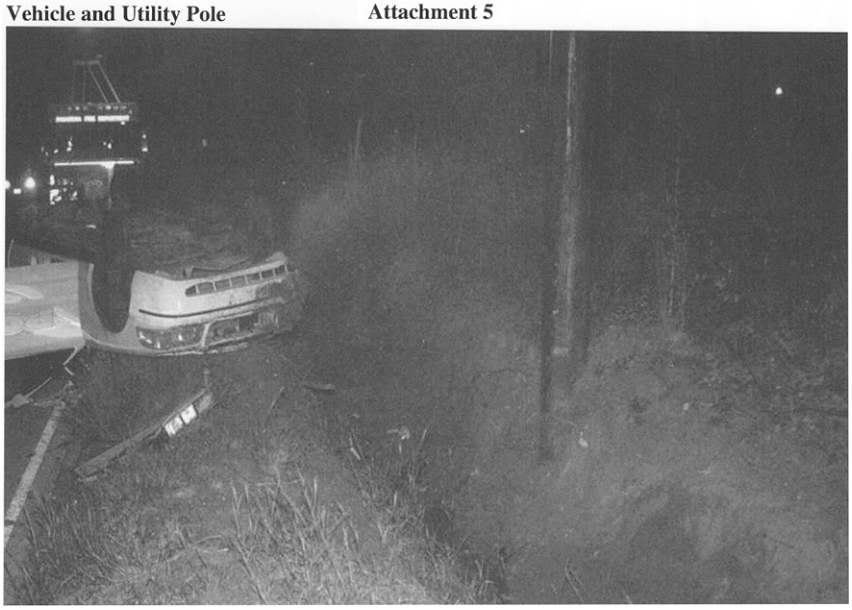

Fairmont Pkwy
Red Bluff Rd
Red Bluff Rd
N
0 500 1000 1500 Feet
0 0.1 0.2 0.3 Miles

Vehicle Front View

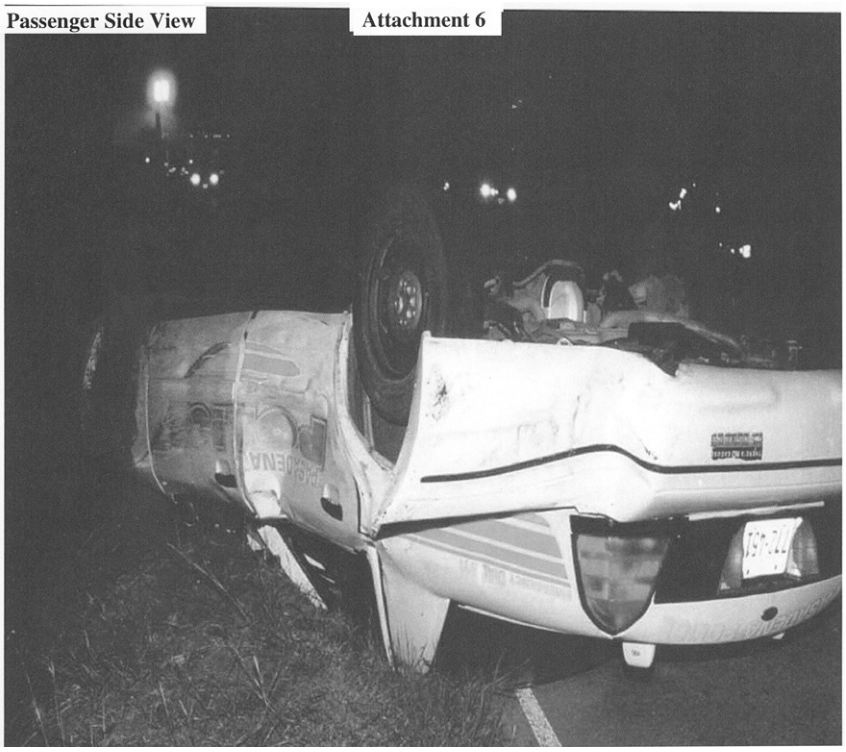
Attachment 4



Vehicle and Utility Pole **Attachment 5**

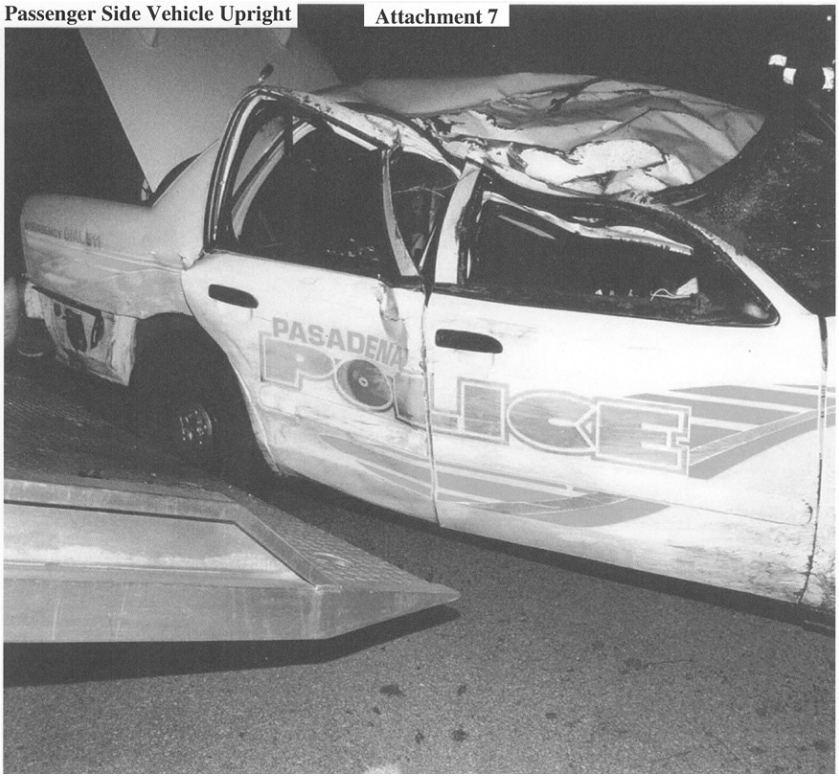


Passenger Side View **Attachment 6**



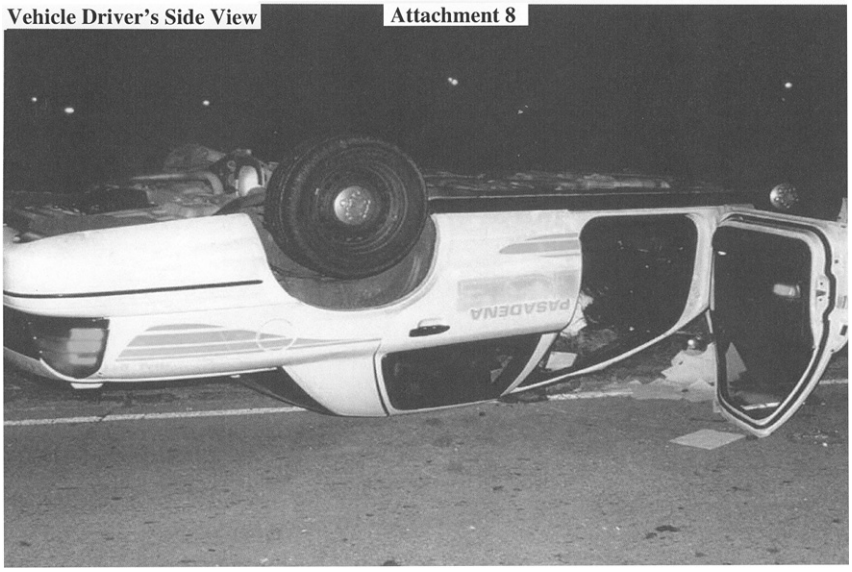
Passenger Side Vehicle Upright

Attachment 7



Vehicle Driver's Side View

Attachment 8



Senator BURNS. Thank you very much.

Well, I am going to jump here to Mr. Tuller, who is General Counsel for Verizon Wireless, and hear his testimony, because we are hearing from industry people, then I want to get back to Thera, because her message, too, is very good for this committee, and there again you can summate if you wish, but your full statement will be made a part of the record, and we welcome you here today. Thank you very much for coming.

STATEMENT OF S. MARK TULLER, VICE PRESIDENT AND GENERAL COUNSEL, VERIZON WIRELESS

Mr. TULLER. Thank you very much, Mr. Chairman. I want to stress three issues today about E–911 deployment. First, Verizon Wireless has successfully met its schedule for deployment of E–911. Second, as we have heard, there is a critical mismatch between the readiness that Verizon Wireless has achieved and the readiness of the other critical components in the E–911 system, particularly the PSAP's, and third, the principal reason for this mismatch in readiness is that the method of funding the enormous investment for this complex technology is unfair, confusing, and inadequate.

On my first point, Verizon Wireless has progressed. We have devoted significant resources to this mandate, and we are fully on track. I want to stress, we have heard this morning that E–911 implementation is complicated both because the technology is novel, but also because it involves thousands of vendors, wireless carriers, landline carriers, PSAP's, and, in our case, it involves millions of customers.

We have committed to replacing the handsets of our 32 million customers to enable E–911, all this at a time when the wireless industry is facing unprecedented financial pressure, competition, and demand for alternative uses of capital, including the need for greater coverage, new digital technology, and wireless data products. Nonetheless, we have met our deadlines for deploying E–911. We provide Phase I service to more than 1,700 PSAP's in 38 States, covering an estimated 120 million people.

We have activated Phase II service permitting latitude and longitude location to over 260 PSAP's serving about 30 million people. We are selling 10 brands of phones that have global positioning system capability within them.

Nearly all of our switches nationwide are able to support 911 Phase II requests by the PSAP's, and that leads me to the second point, the mismatch between our level of readiness and the readiness of the other links of the chain, because we and the other wireless carriers are under fixed deadlines to make ready and deploy our parts of the chain, yet despite our best efforts, the PSAP's are lagging behind. There are 4,000 PSAP's that have never requested Phase I service from my company, let alone Phase II service.

Additionally, we have found that PSAP's have requested service on the expectation that they would be ready in time for us, and yet, in reality, did not have proper funding or resources to go live. This means our effort was misprioritized or, in some cases, wasted.

However, the most wasteful disparity involves the GPS handsets. As I mentioned, we are selling 10 different brands of handsets with a complicated chip set inside that enables the handset to fix its lo-

cation from the GPS satellites and relay that location information whenever the user makes an emergency 911 call.

It is amazing technology, and we pay our vendors a significant cost for the GPS chip sets in our phone which we cannot charge our customers because of the wireless competitive pricing, and as a result of the delays in PSAP deployments, we are putting millions of E–911-capable phones in the public's hands on the schedule required by the FCC, and those phones are useless for E–911, where the PSAP's are not equipped and ready to receive the location information.

Mr. Chairman, at current course and speed, the GPS phones that we are selling today will be retired and thrown away before most PSAP's can be made ready, and that is related to my last point, that the system for funding E–911 is inadequate, unfair, and wasteful. The PSAP's and the carriers should be supported with E–911 funding, yet all too often PSAP's and carriers are deprived of the funding they need, and carriers and their customers are expected to pay for E–911 deployment without reimbursement.

As you can imagine, it is very disturbing for my company to fund the extra cost of the GPS phones knowing that we do not have a clear path to recover our costs, and knowing, as I just said, that most of the money will be wasted. The 911 taxes that most States require us to put on our customers' bills should be used to reimburse all of the carrier and PSAP costs associated with deployment. By these taxes, wireless subscribers have paid approximately $700 million a year to the States to support wireless E–911, but as we have heard, in many cases, they are being spent on other things. New York has collected over $200 million in taxes, but it has not been used to support carrier costs. To be blunt, the diversion of funds that we must collect from our customers under the label of a 911 tax is akin to false advertising by some governments.

Mr. Chairman, E–911 is moving forward and in some places, it is being done right. I especially do want to commend the productive partnership between the professionals in the public safety community and the professionals within our industry working together to get the job done, but to make further progress, Mr. Chairman, I ask that you and your Committee consider what steps Congress can do to address the funding and other problems that are slowing progress toward this goal.

Thank you.

[The prepared statement of Mr. Tuller follows:]

PREPARED STATEMENT OF S. MARK TULLER, VICE PRESIDENT AND GENERAL COUNSEL, VERIZON WIRELESS

Thank you for the opportunity to appear before you today. I am Mark Tuller, Vice President and General Counsel of Verizon Wireless. Verizon Wireless serves over 32 million customers in 49 states and the District of Columbia. Our position in the industry gives us a unique perspective on the challenges of implementing E–911.

I commend Chairman Burns and the members of the Subcommittee for holding this important hearing to discuss this critical issue for consumers, the nation, and the wireless industry. Verizon Wireless and all wireless carriers have long recognized the importance of providing E–911 service to the public. Wireless phones help ensure public safety on highways, in cities, towns, workplaces and neighborhoods. More than 137 million wireless users in the United States make more than 150,000 calls daily for help or to report an emergency.

Since the first FCC proceedings on this issue in the mid 1990s, and the subsequent passage of Chairman Burns's landmark Wireless Communications and Public Safety Act of 1999, we've come a long way and seen tangible results. Verizon Wireless has made significant commitments to the full and successful implementation of E–911. We have successfully implemented extensive network component upgrades, overhauled our handset specifications and purchased modified handsets, and completed a complex series of tasks associated with providing enhanced 911 Phase I and Phase II location services.[1] Other wireless carriers have also worked tirelessly. As of January 15, 2003:

- Verizon Wireless provides Phase I E–911 service to a total of 1,728 PSAPs serving an estimated population of 120 million residents in 38 states. We're presently working on filling about 175 requests for Phase I service.
- Verizon Wireless has met all milestones for making its national network capable of providing Phase II service to meet PSAP requests.
- Verizon Wireless now provides Phase II service to 261 PSAPs in FL, IL, IN, NY, OH, PA, RI, SC, TN, TX, VA, and VT, serving an estimated population of 30 million residents. Verizon Wireless is presently working on about 125 requests for Phase II service.
- Verizon Wireless currently offers ten handset models that are Phase II Global Positioning System (GPS) location-capable.

The work we've done with the public safety community is extensive, yet if you consider that there are over 6,000 PSAPs operating in the country there is still far more that needs to be done before the country has full E–911 capability. There are still critical issues to resolve regarding E–911 implementation. These issues are:

- PSAP and LEC readiness and coordination
- The unfair, confusing, and inadequate system of funding—or rather, not funding—the deployment of E–911 service
- The need for a firm public safety plan

I. The Hatfield Report and Overall Status of Wireless E–911—"If We Build It, When Will They Come?"

As you can see, Verizon Wireless has done all that has been asked of us to make our nationwide network ready to meet PSAPs Phase II service requests. We invested more than $50 million in capital to prepare our network for Phase II, yet only about 400 of the over 6,000 PSAPs in the country have made themselves ready to order and use Phase II service. We've also spent a considerable amount on new handset capabilities. Every one of the new phones that we're bringing to market now has GPS location capabilities built in. Regrettably these nationwide capabilities are going to waste. The critical factor that must be overcome is making sure that PSAPs are able to get their equipment, vendors and staffs up to speed rapidly to be able to accept and use this Phase II service. The Federal Communications Commission (FCC) enlisted Dale Hatfield to conduct an analysis and report on the technical and operational issues that affect wireless E–911 deployment. Dr. Hatfield found that this lack of PSAP readiness has impacted nationwide E–911 capabilities.[2] Mr. Hatfield's inquiry confirmed that the focus of attention has "shifted from discovering, developing, evaluating and selecting the ways of locating mobile units to integrating the location information into the existing E–911 system." More specifically, now that wireless carriers have selected and begun their deployment of location technologies, there is a need for increased attention on, among other things, PSAP and LEC readiness.

While wireless carriers, in the midst of the most restrictive financial environment in their history, are required by the Commission's rules to deploy location technologies and must comply with strict implementation deadlines that are not entirely conditioned on the readiness of PSAPs or the underlying wireline infrastructure, the Commission's wireless E–911 rules provide no assurance that other links in the chain will achieve upgrades to their capabilities on a schedule that will match the

[1] Under the FCC's rules, wireless E–911 has been deployed in two phases: Phase I E–911 service provides emergency call takers with the telephone number of the mobile caller along with the location of the radio transmitter (cell site) handling the call. Phase II E–911 service improves upon the accuracy of the information by estimating the caller's latitude and longitude of the mobile caller's location. This Phase II latitude-longitude information is derived either through the use of location determining equipment embedded in the mobile caller's handset, in the network or a combination of both.

[2] A Report on Technical and Operational Issues Impacting The Provision of Wireless Enhanced 911 Services Prepared for the Federal Communications Commission by Dale Hatfield.

schedule the Commission has imposed on wireless carriers. As a result, the wireless industry is in the process of investing hundreds of millions of dollars to deploy wireless E–911 capabilities without any assurance that wireless customers will benefit from the location capabilities wireless carriers are incorporating into their handset and network infrastructures. Verizon Wireless and the wireless industry welcome the findings of the Hatfield Report and its emphasis on the importance of involving all of the critical stakeholders who must integrate wireless location information into the 911 systems to better serve the public.

Significantly, the Hatfield Report addresses the issue of PSAP readiness, and concludes that PSAP readiness remains a potential detriment to the rapid and efficient rollout of wireless E–911 services due to a limit on how much coordination can be carried out on a volunteer basis by PSAP personnel with full time responsibilities in their home agencies; the difficulty PSAPs are encountering obtaining sufficient funding to request wireless E–911 (there are at least 4,000 PSAPs that have never requested Phase I services from Verizon Wireless, and 94 percent have still not requested Phase II); and even more troubling, the recent redirection of E–911 funds by state legislatures who seek to fund other programs; and the lack of an advocate (or "champion") at the Federal level of government that would work with state and local entities to educate PSAPs on the importance of E–911 in general, and wireless E–911 services in particular.

E–911 technology involves not only wireless carriers and PSAPs, but also local wireline carriers. For example, some technology changes involving the local exchange carrier's (LEC) Automatic Location Information (ALI) database are required for the ability to get continuous inquiry into a wireless caller's location, not just a one-time inquiry at the start of the call. This is necessitated by the mobile nature of wireless communications. This "continuous-inquiry" functionality, requested by PSAPs and supported by the wireless industry, requires upgrades to LECs' interface with the ALI database.

Our experience in the Verizon wireline territory has been positive. For example, we have rolled out Phase II E–911 in Virginia in a cooperative partnership with the PSAPs and Verizon. But other local exchange carriers reported they were still in the process of adding this capability to their ALI databases when asked by the FCC. Some LECs are still seeking state commission approvals to changes to their tariffs, and some of these requests are being challenged by PSAPs. Waiting for these upgrades and changes to these tariffs and pricing schedules have contributed to deployment delay.

II. The Tax and Reimbursement Programs of Some State and Local Governments Have Been Unfair to Customers, Wireless Carriers, and PSAPs

Verizon Wireless thinks it's time to examine the state and local taxes assessed upon wireless consumers to pay for the costs of E–911 implementation, and the administration of the resulting funding pools. The idea was to tax wireless customers to reimburse PSAPs and carriers for the enormous costs of E–911 deployment. Unfortunately, the customers are being taxed for a service that often is not being provided; the PSAPs are frequently not receiving adequate funding from the pools; and wireless carriers are not being fully reimbursed for their costs.

Although wireless subscribers contribute approximately $700 million a year to support wireless E–911 service, this money is not always provided to the PSAP serving the subscriber's home market. For example, as the *New York Times* recently reported, because New York City and Long Island operate their own emergency 911 systems, they do not share in the millions of dollars raised by the state through consumer surcharges.

Worse still, some states have "raided" their E–911 pools to cover budget deficits. New York was one of the first states to add a "911 tax" on monthly wireless bills. Ten years later, New York has collected over $200 million from wireless customers, but much of the money has been diverted to other things. Auditors found that the 911 funds have paid for police radios, travel expenses and dry cleaning. In California, more than $50 million dollars earmarked for PSAP implementation of E–911 was diverted in 2001 to close gaps in the state budget. North Carolina similarly decided to spend millions of E–911 dollars on other unrelated matters. Consumers' ability to benefit from emergency location information would be greatly enhanced if PSAPs had access to, and could prioritize the use of, the hundreds of millions of dollars being collected from wireless consumers.

Twenty six million of our thirty two million Verizon Wireless customers remit over $130 million annually to pay for E–911 implementation. Yet we receive slightly less than a $1 million per month for reimbursement of costs associated with E–911 implementation. Well over ninety percent of the cost recovery money we do receive

is for Phase I deployment. And we've not yet been paid for the more than $50 million in up-front expenditures for our nationwide Phase II network enhancements or the costs of location-determination capability added to each GPS handset.

The inadequate funding and redirection of the 911 surcharge monies collected from wireless customers is the single biggest obstacle to ubiquitous deployment of E–911. Congress must use its oversight authority to bring an end to the scheme of collecting 911 surcharges which are never used to reimburse PSAPs or carriers for costs associated with E–911 implementation. We also expect during the legislative sessions in many states to be facing "Homeland Security" taxes and fees either as direct surcharges on our customers or as charges to the companies. Treatment of E–911 funds to date fails to engender confidence that any of that money will be used to implement E–911, an important component of homeland security. I also fear that the lack of an effective cost recovery program will result in consumers purchasing Phase II capable phones today that may never operate in an area with a Phase II capable PSAP.

III. A Public Safety Plan Is Crucial to E–911 Success

Creating a model statewide deployment plan should be the first priority for every state. Within any given state, there are significant inconsistencies from PSAP to PSAP and they are at varying levels of readiness and effectiveness. Public and private sector entities would benefit from common contractual and operational understandings. These varying levels significantly impact a PSAP and/or wireless carriers' ability to implement Phase I and Phase II. States should work towards harmonizing PSAP readiness within their borders.

National guidelines may be beneficial to create uniform principles that would facilitate deployment and promote PSAP interoperability across state borders. There are already a number of states that have demonstrated significant success in implementing Phase I in the vast majority of their PSAPs. These states share many common hurdles and common solutions, which could help states that are not as far along in this process. The elements common to statewide solutions are:

- **A central planning body** within the state that manages financial, as well as implementation processes.
- **Technology neutrality**—a must for operational, technical and financial solutions.
- **Cost recovery** funding mechanism for both the carriers and the PSAPs should be in place.

Each state should create a state E–911 Task Force comprised of representation from the public/private sectors, PSAPs, wireline and wireless carriers, to establish the requirements and develop the program for how 911 and E–911 will be delivered within the state. Centralized planning within each state, an established appropriate funding mechanism and appointing a state Director/Administrator of statewide 911 systems are the key factors that have contributed to early state successes. A state Director/Administrator can do further assessment planning and build it into current deployment schedules. Statewide planning will most likely enable redundancy and interoperability among existing PSAPs to give a higher level of service in these times. Setting aside local concerns and giving guidance at the state level is necessary to achieve success.

This mirrors the congressional direction included in S. 800, the Wireless Communications and Public Safety Act of 1999, to implement statewide plans for comprehensive deployment for E–911.

IV. Conclusion

Verizon Wireless and the wireless industry are proud of our role in promoting public safety. Much still needs to be done by all parties to the E–911 effort—the FCC, the wireless industry, the technology suppliers, and the PSAPs, but we are turning the corner. I thank the Committee for holding this hearing and hope that we can continue to improve the cooperation and coordination among all parties to make enhanced 911 a reality for all Americans.

Senator BURNS. Thank you, and I think we might have found a place where we can affect a little bit of change for the deployment.

We have Ms. Thera Bradshaw this morning, and she is with the International Association of Public-Safety Communications Officials, and we look forward to your comments this morning.

STATEMENT OF THERA BRADSHAW, PRESIDENT, ASSOCIATION OF PUBLIC-SAFETY COMMUNICATIONS OFFICIALS INTERNATIONAL

Ms. BRADSHAW. Thank you, Mr. Chairman, and to the members of your Committee for the opportunity——

Senator BURNS. You might want to pull that microphone up close.

Ms. BRADSHAW. Thank you again, Mr. Chairman, and to the members of the Committee, for the opportunity to appear before you today. I am especially grateful to you, Chairman Burns, to Senator Inouye, to Senator McCain, and to Senator Hollings for your leadership on drawing the much-needed attention to this wireless Enhanced-911 issue. I also, Chairman Burns, want to acknowledge yourself and Senator Clinton and Representative Shimkus and Representative Eshoo for the dedication you have shown and the commitment you have shown in founding the E–911 Caucus, and would encourage your Congressional colleagues to join you.

I am going to just touch on three things, really, in my testimony, the sense of urgency, the need for Federal help in terms of champion money and policy, and the direct tie that 911 has in linking to homeland security.

I am Thera Bradshaw, president of the Association of Public–Safety Communications Officials International, known as APCO. I am also assistant general manager in the City of Los Angeles, which supports my testimony here today. I have spent my career building and managing 911 centers from rural areas of both Oregon and Washington to urban areas of San Francisco, and now I am in Los Angeles.

As John mentioned, I was president of the National Emergency Number Association, and co-signer on the 1995 consensus document that really brought the wireless industry and public safety together and led to the Federal communications rules on wireless Enhanced-911.

APCO's members, the membership I represent and are most proud of, are truly the first of the first responders. They are the ones who build and manage the 911 centers. We are the first voice people hear when they call 911 for help. We put the emergency response in motion, and it is my membership that I represent who speak with callers in distress, identify these locations where the emergency exists, dispatch the help, and provide the means for the responders to actually talk to each other when they get to the scene where help is needed. APCO is the face of 911, with 16,000 members.

Mr. Chairman, today we are dependent upon wireless technology both in our own personal lives and equally in public safety, and in the public safety community. We need technology to do our job, we need this technology to be deployed broadly and quickly, to be able to respond adequately to emergencies. In the post-September 11 that many people have already mentioned here in this hearing today, we also must be prepared today to respond to terrorist attacks right here in America, something I thought I would never see happen in my lifetime.

Full and effective deployment of Enhanced-911 is a complex undertaking. Many have spoken to that, and the readiness of the 911

centers is imperative. The public safety answering points are working hard to prepare for Enhanced-911 deployment, and many are ready, but are still waiting for all the stakeholders to come together and do their part.

In jurisdictions where all stakeholders have come together, and I have been privileged to be a part of those, that included the wireless carriers, the local exchange carriers, the equipment manufacturers, and the 911 centers, deployment moved quickly and swiftly and was achievable. In jurisdictions where that does not happen, progress is either not happening, or progress is slow. I urge Congress and the Federal Communications Commission to just basically accept no further delays, and applaud you for your leadership in this effort.

At the heart of PSAP readiness, there are two primary things that I want to talk about, and I think are important for you to hear. One is funding, which a lot of people have alluded to and talked about, and the other is training. The most valuable resource we have in 911 centers are our human resources. It is the people who are taking those calls for help, and like John, Jenny and myself, we have all sat there and taken those calls for help ourselves, so we have been on that first line. I strongly urge Congress in its homeland security appropriation to recognize the essential role that emergency communications has in protecting our homeland right here in America.

As the Nation's first first responders, APCO asks that you clearly define first responder to include, not exclude, but to include 911 centers and emergency communications professionals who sit and answer those calls.

Our 911 communications infrastructure must have substantial Federal leadership and Federal investment. The diversion of 911 funds that we have heard about, and it has certainly been a point of controversy and is of concern to APCO—and nearly 40 States have implemented some type of 911 surcharge. This funding is critical for the local 911 centers and for PSAP readiness. However, in a significant number of States funds have been diverted. We know of nearly $500 million that has been used for other purposes.

In my own home State of California, this has happened at least three times, and we have also heard about this happening elsewhere in some of the testimony this morning. I cannot emphasize to you enough, and any of the testimony that you will hear or you have heard today, how important this is to life and death issues here in America at a most important time. By diverting funds intended for 911 deployment, we are prolonging the implementation of life-saving technology that many of our citizens frankly assume is already in place today.

I am proud to say that APCO has helped in some supplementing of public safety answering points funding. Last year, we established the Public Safety Foundation of America to actually expedite and to support moving forward with the deployment of wireless 911. This foundation, I am proud to say, is guided by a coalition bringing a number of stakeholders together from our Nation's Governors to cities, counties, and our public safety associations, and John Melcher sits on that foundation.

Recently, the Foundation awarded $2.4 million to 29 different jurisdictions in 20 different States, and Chairman Burns, again I would like to thank you, along with Senator Dorgan, for participating in those grant announcements and taking a little of that money from APCO that we were glad to give, and need more of to give. I hear Jenny saying they are going to be back.

The second issue that I think is incredibly important, and that I want to bring to your attention, to readiness is the human resources, that the people who are taking the calls and who are dispatching resources, they have to be adequately prepared. There have to be resources to adequately prepare and train them to be able to do that most critical job as the first first responder.

Because of an ever-changing environment from technology, to laws, to all sorts of things, training of 911 personnel is a significant challenge and an ongoing challenge, and frankly, it is generally the first thing in the budget to get cut, is training dollars. APCO strongly believes that Federal funds must be dedicated to training 911 personnel as a means of bolstering homeland security and emergency preparedness in America.

Finally, I would be remiss if I did not take the opportunity to emphasize the need for adequate spectrum and interoperability. The lack of spectrum for public safety has led to dangerous congestion. It has directly impacted interoperability, the ability to talk to each other at the scene of an emergency, and is also a homeland security issue that is important, I know, to you, Chairman Burns.

In closing, the wireless Enhanced-911 effort began after this consensus document was signed in 1995, 8 years ago. At that time, the need was urgent, and we have now experienced the horror of September 11. Our homeland security is threatened in a way that was inconceivable to me when I signed that document in 1995. We need to make this happen now. We need Enhanced-911 any time, any place, anywhere available to every citizen, visitor, business in America. It is that important.

And as my colleague has articulated, this is a global issue. It is not just a State-by-State or local community issue. It is global, and I applaud the efforts of Congress for tackling this, taking this on. We stand ready as an association to work with you and to work with all stakeholders to address the challenges and appreciate very much your championship of this issue.

Thank you.

[The prepared statement of Ms. Bradshaw follows:]

PREPARED STATEMENT OF THERA BRADSHAW, PRESIDENT, ASSOCIATION OF PUBLIC-SAFETY COMMUNICATIONS OFFICIALS INTERNATIONAL

Thank you, Mr. Chairman and members of the Committee, for this opportunity to appear before you today. I am especially grateful to Chairman Burns, Senator Hollings and Senator Inouye for your leadership in drawing much-needed attention to the E–911 issue.

I am Thera Bradshaw, President of the Association of Public-Safety Communications Officials International, known as APCO. I am also Assistant General Manager, Policy and Public Services, for the City of Los Angeles Information Technology Agency. My career has been dedicated to building emergency communications systems in a variety of venues up and down the west coast, from rural Washington and Oregon to urban areas such as San Francisco and Los Angeles. In addition to being a long-standing member of APCO, I served as President of the National Emergency

Number Association in 1994–95 and was a co-signer of a 1996 consensus document within the public safety community that led to the FCC rule on E–911 deployment.

APCO is the oldest and largest not-for-profit professional organization dedicated to public safety communications. Our members are truly the *first* of the first responders in an emergency. We are the first voice people hear when they call 911 for help—and we put the emergency response in motion. In addition to getting as much information from the caller as possible, our members identify the location of the emergency, dispatch help to that location, and provide the means for the responders to communicate with each other on the scene. APCO is the face of 911, and we have nearly 16,000 members in the U.S. and around the world.

Mr. Chairman, you and your colleagues are well aware that public safety and emergency communications capabilities are critical in our increasingly wireless world. Virtually everyday, we hear of yet another life being lost or put at greater risk because the location of a 911 call from a wireless phone could not be identified. As you know, E–911 technology provides the communications infrastructure to locate these calls.

We *need* this technology deployed as broadly and as quickly as possible. E–911 is a critical component of our public safety net when we are faced with fire, crimes in progress, medical emergencies, traffic accidents, and hundreds of other possible scenarios requiring an immediate emergency response. Unfortunately, in the post-September 11 world, these potential emergencies also include terrorist attacks on U.S. soil.

Full and effective deployment of E–911 is a multi-faceted undertaking, but today I want to focus your attention on one primary concern: the readiness of our 911 Centers. In the communications world, these centers are known as public safety answering points or PSAPs, and I will use that terminology here. I also want to briefly address the issues of spectrum availability and interoperability, which are critical to the overall communications needs of our nation's public safety personnel.

At the heart of PSAP readiness are two primary issues: PSAPs must be adequately funded, and PSAP personnel must be appropriately trained.

Let me first address the matter of PSAP funding. In terms of any Federal appropriations for homeland security or emergency preparedness, I strongly urge Congress to recognize the essential role of emergency communications in protecting our citizens and our homeland. As the nation's *first* first responders, APCO and its members ask that you clearly define the term "first responder" and that emergency communications professionals be included in this definition.

I would also like to address the current controversy regarding state funding. As you know, nearly 40 states have implemented a surcharge on cell phone customers to build a fund dedicated to deploying E–911. Given that most states and cities are currently facing severe budget deficits, this funding is crucial to PSAP readiness. These dollars are required for PSAPs to receive and process location information essential to identifying and locating wireless calls to 911. However, because not all states have enabling legislation that clearly specifies how these funds can be expended, a significant number of states have already diverted a total of nearly $500 million from these funds and used it for other expenses.

In my home state of California, a proposal was introduced last month to transfer $51 million from the State Emergency Telephone Number Account to pay for non-911 operations. This follows on the heels of a similar transfer of $50 million last year. According to the Comptroller for the State of New York, $162 million was shifted from their E–911 fund and used to pay for non-911 expenses. In a cruel juxtaposition, this news was discovered subsequent to learning of the tragic drowning of four high school boys in Long Island Sound. The boys made a cell phone call to 911 as their rowboat was sinking, but they could not be located because E–911 technology was not in place. I cannot emphasize this enough—these are *life* and *death* issues we are dealing with. By diverting funds intended for E–911 deployment, we prolong the implementation of this life-saving technology that many of our citizens, sometimes to great despair, assume is already in place.

On a positive note, I am proud to say that APCO is stepping up to help with PSAP funding. Last year APCO created the Public Safety Foundation of America (PSFA), a public-private partnership dedicated to saving lives by supporting and expediting the nationwide deployment of E–911. Funding for the PSFA is provided by a variety of sources, including donations from corporations, APCO chapters, and other organizations.

Two weeks ago, the PSFA announced its inaugural round of grants, awarding nearly $2.4 million to 29 grantees in 20 states. Three more grant cycles are scheduled for this year. Recently, several of your Senate colleagues joined us in announcing the grant awards in their home states. I would like to thank Chairman Burns and Senator Dorgan for honoring the PSFA and its grantees by participating in

grant announcements on February 20 in Montana and North Dakota, respectively. Although we realize these grants constitute just a small fraction of the total dollars needed to assure PSAP readiness, we at APCO and its foundation wanted to provide tangible support as well as technical advice toward the E–911 effort.

I am proud to say the PSFA is the *only* public safety communications organization to provide direct financial support to state and local public safety organizations. The PSFA is guided by a coalition of organizations with a shared commitment to public safety, including the International Association of Chiefs of Police; the International Association of Fire Chiefs; the National Association of Counties; the National Association of State EMS Directors; the National Emergency Number Association; the National Governors Association; and the National League of Cities.

The second issue critical to PSAP readiness is ensuring that our public safety communications personnel are adequately trained. Because the technology used by the PSAPs is constantly evolving and improving, training presents an ongoing challenge and expense to the PSAPs. This will be especially true in the next few years as the nation's wireless carriers introduce new technologies to meet the FCC rule of nationwide E–911 deployment by the close of 2005.

APCO has long been aware of the importance of training and, in 1988, established a nonprofit institute to provide affordable training and certification for fire, police and EMS dispatch professionals. The APCO Institute trains 10,000 individuals per year and remains the only not-for-profit educational institute that serves the needs of the public safety communications community. Still, funding for continuous training remains a challenge to most PSAPs.

APCO strongly believes that Federal funds should be made available for training of public safety communications personnel as a means of bolstering homeland security and general emergency preparedness. With the continuing threat of terrorist attacks involving the possible use of chemical or biological weapons, public safety in even the smallest communities has now become a *national* concern. Moreover, Federal assistance is especially important now to help mitigate any cutbacks in funding by state and local governments due to budget shortfalls.

In addition to PSAP readiness, I would also like to address briefly the need for additional spectrum and improved interoperability, two issues that are critically linked.

The lack of sufficient spectrum for public safety communications has led to dangerous congestion on existing channels. Homeland security efforts have increased the need for public safety communications capacity and capability, placing even greater demands on scarce public safety spectrum allocations. As a result, the ability of our public safety agencies to communicate with each other in emergency situations is severely limited.

As you are aware, resolution of the spectrum issue has been pending for many years now. In 1996, the joint FCC/NTIA Public Safety Wireless Advisory Committee recommended that approximately 24 MHz of spectrum be allocated for public safety use within five years. In 1997, Congress mandated that the FCC so allocate this spectrum. Although the FCC did reallocate the spectrum from TV channels 63, 64, 68 and 69 for public safety, Congress' 1997 mandate permitted these television stations to remain on the air through 2006—or until 85 percent of households in the relevant market have the ability to receive DTV signals, whichever is later. At this stage, it is highly unlikely that this 85 percent benchmark will be met until long after 2006 and probably not until well into the next decade. As a result, police, fire, emergency medical, and other public safety personnel must wait indefinitely for the additional radio spectrum and communications capabilities that, frankly, they needed yesterday. Therefore, we continue to urge that Congress revise existing law and establish December 31, 2006, as a firm date for the nationwide availability of this radio spectrum for public safety communications.

The lack of spectrum also has direct and significant impact on interoperability. Because of non-interoperable radio systems, public safety personnel frequently are unable to communicate with other responders in an emergency. In the aftermath of the Oklahoma City bombing in 1995, emergency response personnel attempting to coordinate life saving activities had to rely on hand signals and "runners" because their radios lacked effective interoperability. To varying degrees, similar difficulties were experienced on September 11 at the Pentagon and the World Trade Center. Emergency crews coming into New York from the surrounding areas found they could not communicate with emergency personnel already on the scene because of non-interoperable systems. New allocation of spectrum would allow agencies in the same geographic areas to utilize common or compatible radio frequency bands, permitting a more coordinated and therefore more effective emergency response.

Thank you again for the opportunity to join in this important dialogue on E–911 and related public safety communications issues. Once again, I commend Chairman

Burns, Senator Hollings, Senator Inouye, and the members of the Committee for raising the profile of these very important issues. APCO and its membership stand ready to work with Congress and all other stakeholders to address the challenges before us.

Senator BURNS. Thank you very much. Just one little suggestion at this point. It may be a global issue, but it sounds like to me that the counties, the local communities who have not made application for those funds to update their PSAP's—and as Mr. Tuller pointed up, we have the equipment out there and then there is nobody to talk to on the other end, so to speak.

The county commissioners are all meeting over here in a hotel out on Connecticut Avenue. I would suggest you take a whole bunch of folks out there and start, because basically it starts with a county commissioner who really wants to do something about his communications center, and his obligation toward public safety. It may be global, but it all boils down to one ground-level commissioner, or somebody to plead that case. I would suggest that you, before those county commissioners go home, I would go over and circulate a little bit and make some points.

Ms. BRADSHAW. We appreciate your suggestion and we will be glad to do that.

Senator BURNS. Because that is where it starts.

Mr. Amarosa, with TruePosition, Incorporated, and we welcome you here today and look forward to your comments, and your full remarks will be made part of the record if you want to summarize your remarks.

STATEMENT OF MICHAEL AMAROSA, SENIOR VICE PRESIDENT, TRUEPOSITION, INC.

Mr. AMAROSA. Thank you, Mr. Chairman. Good morning, and good morning, members of the Subcommittee as well. My name is Michael Amarosa, and I am Senior Vice President of TruePosition, and it is a pleasure to appear before you this morning.

Let me start by thanking you, Chairman Burns and Senator Inouye and other members of the Subcommittee for your leadership on this important public safety issue. As a result of your conviction that E–911 can bring faster emergency response to all areas of our country, rural, urban, suburban, and your actions on Capitol Hill, much progress has been made toward making E–911 a reality.

Moreover, the recently established Congressional E–911 Caucus will be a further source of support to this critical effort, and I commend the other caucus co-chairs, Senator Clinton, Representatives Eshoo and Shimkus for taking a leadership role on this issue.

Wireless location capability is an integral element of homeland security. It is a critical instrument in providing the E–911 centers, the place where the first call in an emergency is received, the first of the Nation's first responders with more precise information.

I spent 24 years of my career working in public safety, including managing the largest 911 center in the country in New York City. Expeditious and effective emergency response has been the cornerstone of my professional endeavors. It was my responsibility to bring public safety a range of technologies that helped police officers, fire fighters, and emergency service workers.

I was with the NYPD in 1993 at the time of the first bombing of the World Trade Center, just blocks from police headquarters. I remember clearly standing in the 911 center and trying to comprehend the circumstances we had encountered at the Twin Towers on that day. It was an experience of what is sometimes described as the fog of war. It impressed upon everyone organizing our response the critical importance of timely, accurate information, redundancy and interoperability, the bywords that remain the foundation of emergency communications today.

After September 11, 2001's attack, I visited the site, Ground Zero, and directed members of TruePosition employing our technology at that location to locate cellular signals at the World Trade Center rubble. We were able to locate approximately 1,600 of those signals, and provided that information to FEMA officials to check it against those who could possibly have been in the area at the time, but it reminded me once again of our inability of the emergency response teams to talk to each other and to locate calls from wireless phones to 911. State-of-the-art technology should not be brought to the scene. It should be there, in place.

TruePosition's research, development, testing, and implementation have been central to making E–911 a reality. TruePosition has the technology to locate all handsets on the market today, and is now providing location technology that is in compliance with the FCC's requirements in 12 cities. We are particularly proud of our relationship with Cingular Wireless. It has produced the most definitive and extensive roll-out of E–911 to date.

The deployment of TruePosition's technology on 2,500 Cingular cell sites prior to the end of last year met the schedule agreed upon by Cingular and the FCC. To date, we have deployed more than 4,600 units on Cingular cell sites, and the action by Cingular and TruePosition is a tangible demonstration that E–911 is a reality.

I am also pleased to hear today that the FCC is launching an E–911 coordination initiative, looking forward also to working with them on this issue. For progress to continue, it is important that FCC's principal regulations be maintained with respect to implementation, timing, and location accuracy. The key to success in deployment lies in speeding up the lagging factors rather than slowing the leading ones, and this means assuring the investment in PSAP infrastructure and delineating the responsibility of the private parties carefully.

The obligations of the wireless carriers, the local exchange carriers, and other entities that contribute to 911 effectiveness must be spelled out and must be stable. Constant changes to the E–911 deployment deadlines and accuracy requirements must be recognized as counterproductive. The public investment in ensuring that 911 communications centers are able to receive E–911 information and other critical information is part of the ongoing process of improving homeland security, and should be considered a national priority deserving of Federal financial assistance.

First, funding assistance must be available both to modernize the customer premises and equipment of the 911 centers as well as to train personnel to operate these upgraded systems. Second, there are numerous circumstances where the monies assessed against wireless phone use ostensibly for the purpose of E–911 are diverted

to fund other programs or to cover State and local government fiscal shortfalls. Any financial assistance should address and correct this problem.

In summary, Mr. Chairman, progress has been made in bringing E–911 to the American people. It is now a technological reality. The critical next step is to hasten the deployment, where a great deal still needs to be done. We look forward to supporting your efforts here on the Subcommittee to make this universally available, and I thank you for this opportunity to speak before you this morning.

[The prepared statement of Mr. Amarosa follows:]

PREPARED STATEMENT OF MICHAEL AMAROSA, SENIOR VICE PRESIDENT, TRUEPOSITION, INC.

Good morning Mr. Chairman and members of the Subcommittee. My name is Michael Amarosa and I am Senior Vice President of TruePosition, Inc. It is a privilege to appear today as part of the Subcommittee's continuing review of the implementation of E–911 Emergency Calling Systems. Enhanced 911 or E–911 is the technology that locates individuals calling for help from a wireless phone. The availability of the technology to the public can save lives, protect property, and contribute to a more secure America. In fact, wireless location capability is an integral element of homeland security and is a critical instrument of providing the Nation's first responders with more precise information.

TruePosition commends Chairman Burns, Senator Inouye, and other members of the Commerce, Science and Transportation Committee, for their enduring leadership on this important public safety issue. Much progress can be traced to your conviction that E–911 can bring faster emergency response to all areas of the country, rural, urban and suburban, and your efforts toward making E–911 a reality. The recently established 911 Caucus, which Chairman Burns and Senator Clinton chair in the Senate, and Congressman Shimkus and Congresswoman Eshoo chair in the House, is a further source of support to this critical effort.

Expeditious and effective emergency response has been at the center of my professional career. I spent 24 years working in public safety. It was my honor to manage the largest 911 center in the Nation, that of the New York City Police Department, as Deputy Commissioner for Technological and Systems Development. The NYPD sought to bring to public safety technologies that would speed police, firefighter and emergency medical service response to the citizen needing help. I represented the NYPD on the Public Safety Wireless Advisory Committee (PSWAC), which the Federal Communications Commission (FCC) established to address public safety spectrum requirements. During my tenure at the NYPD, we undertook and completed a major upgrade of the systems supporting 911. This effort encompassed obtaining the necessary funding, determining and designing the system upgrades, and implementing the upgrades. This experience reflects a microcosm of the ongoing national effort to deploy wireless E–911. Since leaving the NYPD, my role with TruePosition has given me the opportunity to work with the range of 911 communications centers, large and small, urban, rural and suburban. In many respects, the challenges the 911 system faces today parallel past efforts to bring modern technology to emergency response.

Modern technology is crucial to emergency response. I was working as the Director of Communications with the NYPD in 1993 at the time of the first bombing of the World Trade Center, just blocks from police headquarters. I remember clearly the circumstances we encountered at the twin towers that day and how it served as a motivating force behind the department's initiative that it have available the latest communications technology. Redundancy and interoperability became the bywords that remain the foundation of emergency communications today.

TruePosition's very existence evolves from wireless location technology. We have made a substantial investment to develop and provide commercially available location technologies that comply fully with requirements established by the FCC. TruePosition's research, development, testing and implementation have made E–911 a reality. We continue to work with the public safety community and with carriers, both large and small, to bring about pervasive E–911. After the September 11, 2001 attack, TruePosition employed its technology at Ground Zero with the Wireless Emergency Response Team (WERT) to locate cellular signals at the World Trade Center rubble. We were able to locate approximately 1,600 signals. We provided the

information to FEMA officials to check it against those individuals who could possibly be in the area.

TruePosition is now providing location technology to wireless carriers in 12 cities. TruePosition is particularly proud of its relationship with Cingular Wireless LLC as it represents the most definitive and extensive rollout of E–911 to date. The deployment of TruePosition technology on 2500 of Cingular's cell sites prior to the end of last year met the schedule agreed upon by Cingular and the FCC. Today, Cingular continues to use our technology to fulfill new requests from 911 communications centers (referred to as public safety answering points "PSAPs") for location information that meets the FCC's accuracy rules ("Phase II" information). To date, we have deployed more than 4600 units on Cingular's cell sites. By deploying TruePosition's network-based location technology, Cingular has ensured that its subscribers, along with anyone roaming on its network, do not have to purchase new GPS-equipped handsets in order to be located when making 911 calls on Cingular's system. The action by Cingular and TruePosition is a distinct and tangible demonstration that E–911 is a reality.

TruePosition, Inc.

TruePosition's systems work in almost any environment be it indoor, outdoor, urban or suburban. The TruePosition system provides nearly 100 percent yield and is not affected by obstructions such as tall buildings or concrete walls. This capability is critical for emergency responders, who depend upon accurate and precise information regarding the location of the individual needing help.

When a person calls 911 from a traditional wireline phone, public safety agencies typically can automatically determine the individual's location; if the same person calls from a wireless phone, a public safety agency, historically and most often today, must rely on the caller to provide an accurate location . . . that often heard question is asked by emergency communications personnel, "where is your emergency?" As almost 55 million wireless calls to 911 are made annually from wireless phones, the continued rollout of E–911 is critical.

TruePosition's technology is network-based; there is no modification necessary to consumer handsets; nor will consumers need to purchase new GPS-equipped handsets as is required by other E–911 solutions. This means that TruePosition's system can locate any mobile phone, new as well as old, on the Cingular system. All existing phone sets can be located on the TruePosition system within the requirements set by the FCC, as soon as the wireless carrier completes deployment. There is no need to wait years as consumers slowly replace their handsets. Our technology encompasses the four major air interfaces: automatic message processing system (AMPS), code-division multiple access (CDMA), time-division multiple access (TDMA) and Global System for Mobile communications (GSM).

The TruePosition system determines a wireless phone's geographical location by collecting and processing the RF signals transmitted by the phone. When a signal is transmitted—when a phone call is placed—the system gathers information about the signal from nearby mobile base stations. The data are transmitted to a processor that analyzes the information and computes the position of the caller by using TruePosition's patented Time Difference of Arrival (TDOA) and Angle of Arrival (AOA) algorithms. For a 911 call, the TruePosition system then determines the location of the call and delivers the information so that the appropriate PSAP can dispatch assistance to the caller.

The Federal Communications Commission E–911 Mandate

Wireless telephone carriers are required to provide Automatic Location Identification (ALI). Under the FCC's rules there are separate accuracy requirements and deployment schedules for network-based and handset-based technologies. The FCC has also developed different timetables depending on carrier size. As a result of FCC enforcement actions, several of the largest carriers have committed to specific deployment schedules.

The FCC's efforts have been ongoing since 1994. The principal requirements have been in place since 1996. The FCC's policies and enforcement actions demonstrate substantial judgment and commitment, and encompass expertise in engineering, economics and law. It has comprehended the investment that must be made and the evolving technology. It has resolved difficult issues and struck a careful balance between the critical need for location information by the American public, while affording carriers and providers adequate time to come into compliance. Through its action, the FCC has made clear how critical E–911 is; it can be the difference as to whether assistance can arrive in time.

The 911 Infrastructure

The initial discovery, development, and evaluation phase for wireless E–911 technology is largely complete. Technology unquestionably capable of providing the level of accuracy mandated by the FCC is available. Installation is largely accomplished in several major markets. For progress to continue, it is important that the FCC's principal regulations be maintained with respect to implementation timing and location accuracy as that technology is available for deployment. The progress that has been made, and that which will follow, can be attributed to delineating clearly the responsibilities of each of the interests that needs to cooperate to implement E–911. The respective obligations of carriers, local exchange carriers and public safety agencies must continue to be unmistakable.

In the context of the 911 communications centers, wireless E–911 deployment is a systems problem, resulting in part from the reality that different components of the system are independently controlled. In my experience the key to successful deployment in this situation lies in speeding up the lagging factors rather than slowing the leading factors. As a practical matter, this means assuring investment in the PSAP infrastructure, and delineating the responsibilities of private interests (*i.e.* the carriers) carefully. The obligations of the wireless carriers, the local exchange carriers, and the other entities that contribute to E–911 effectiveness must be spelled out and they must be stable. Constant changes to E–911 deployment deadlines and accuracy requirements must be recognized as counterproductive.

There is some reason for optimism. The recent progress in E–911 deployment carries a very important implication for how soon E–911 becomes universally available. The deployment of E–911 systems that has begun in some few markets will produce vast and increasing amounts of relevant information as an inevitable by-product. That information is likely to prove invaluable to all of the wireless E–911 stakeholders—consumers, public safety agencies, PSAP service providers, wireless carriers, technology companies, and regulators. TruePosition believes that it will affect public demand for wireless E–911 service; demonstrate best practices with respect to design, deployment, and operation of wireless E–911 equipment and service; and provide benchmarks against which to judge progress and performance.

Again, my experience in public safety counsels that once there is tangible evidence of a service, and how it can speed emergency response, the public comprehends the importance and advocates its priority. Once embraced by a community's political leadership, the financial challenges to finding the public investment necessary to enhance the emergency response infrastructure moves toward resolution.

Funding the 911 Infrastructure

Public investment in ensuring that 911 communications centers are able to receive and use E–911 and other information is a critical part of improving homeland security and should be considered a National priority deserving of financial assistance. The individuals who staff the local 911 centers are the first responders a citizen contacts when facing an emergency. Confronting the challenge of improving homeland security by improving the efficiency of the Nation's 911 centers will provide tangible improvement toward getting the right emergency help to an incident sooner.

The current PSAP infrastructure, the communications centers that receive 911 calls, face the challenge of integrating the varying technologies that bring about automatic number information and automatic location information that are the fundamentals of E–911. Without increased investment, the current PSAP infrastructure will be constrained in its ability to bring E–911 to all Americans. Investment must be directed to upgrading internal PSAP infrastructure so that the location information and other caller information now being provided by wireless carriers can be transmitted efficiently and effectively to the 911 communications center. Fostering investment in the PSAP infrastructure is a critical element in bringing E–911 to the public. It will enhance the quality of emergency response.

The funding issue encompasses at least two elements. The first is providing adequate funding that allows each community to make the necessary upgrades to receive E–911 information. The second is to analyze present funding mechanisms to determine whether monies are appropriately directed.

We begin with one advantage. The formal institutional structures are in place. There is no need to create a new significant governmental apparatus to provide what is needed. State and local governments have built and managed 911 communication centers effectively. The centers are an important part of providing core public safety services to their communities. In a very real way, 911 communications centers are instrumental in providing the most basic government service and their performance is a measure of how well government is responding to its citizens.

Funding assistance should be predicated on the specific objective of modernizing customer premises equipment of the 911 centers, including design and modification so that the 911 communication center infrastructure is capable of effective and efficient receipt of automatic number, automatic location, and other information via wirleline, wireless and emerging technology forms of communication. Funding should also be available to train personnel to operate the upgraded systems.

In this latter regard, the ongoing educational efforts of the Association of Public Safety Communications Officials, International (APCO) have significantly aided both small and large PSAPs in understanding the FCC's rules and what must be undertaken to meet the formal requirements for making a valid request to a carrier for wireless location information. These efforts should continue and will assist in ensuring that funds are properly directed to meet the goal of a nationwide E–911 capability.

In an important related issue, present funding structures for 911 communications centers remain a very serious problem. There are numerous circumstances where the monies assessed against wireless phone use, ostensibly for purposes of E–911 and other emergency communications service cost recovery, are much too often diverted to fund other programs or cover state and local government fiscal shortfalls. Any financial assistance should address and correct this problem. To be clear, TruePosition believes that this will ultimately be corrected. As wireless location is implemented, it will produce material improvements in safety of life and property. As dramatic episodes of the technology's effectiveness come to light, it should create a public demand for installation in every community, making the diversion of funds less likely. In the meantime, however, it is a practice that should be actively discouraged.

Summary

TruePosition continues to work closely with large and small public safety agencies and the dedicated associations and individuals that represent them, to best integrate our system into the 911 communications centers that receive emergency calls. We have also worked closely with wireless carriers in their significant cooperative effort toward the goal of E–911 deployment. We think that an emphasis on those circumstances where challenges remain, such as the need for investment to upgrade the nation's 911 communication centers, while maintaining the principal E–911 schedules and accuracy standards, is the most direct and timely path to pervasive wireless E–911.

We commend the Subcommittee's leadership in bringing forth nationwide Enhanced-911 systems. E–911 will help individuals in need. It will save lives and property and make all of us more secure.

TruePosition values the opportunity to appear before you today.

Senator BURNS. We thank you, and we thank you for making the trip down here and sharing your thoughts with us. I have just a couple of questions. You all do a pretty good job of answering all my questions in your testimony, and it sounds like we get a little redundant.

There are a couple of things I want to ask Mr. Melcher. With the success that has been enjoyed by Greater Harris County, Texas, and the deployment of 911 down there, when they started out to get this done, are there a couple of things that they did that we could learn from to hasten our deployment, or to make our transition to E–911 a little easier, and sometimes save some money? Are there a couple of things that they did do down there that maybe pointed out the mistakes that we have made in other areas?

Mr. MELCHER. Well, thank you for the recognition of that model, Mr. Chairman. I think it fundamentally consists of two components, leadership and good fiscal responsibility and planning. Our board chairman, also a former county commissioner, Mr. Tom Bass, always said that he wanted to be able to provide the best 911 technology that was affordable for our citizens.

If you look at the model, it has been pretty successful. The user fee on the consumer's home telephone bill is only 34 cents, and

State-wide, we have 50 cents on the wireless phone, so that constitutes the bulk of our budget.

We started our planning back in 1994. We knew that the technology we had in the PSAP's was going to be inadequate, because we had the old, what we called them dumb CRTs. The old informer screens had 16 lines of text, and it was a very serial-based technology, and it could only display things like 123 Main Street.

We knew that as wireless technology would come along, it would not come in as a block number and street name, it would come in as a latitude-longitude, so we pushed our vendors very hard to come up with computer-integrated telephony that allowed our phone systems and our computer systems to talk to each other so that when we received something like a latitude-longitude it would blink a dot on a map, as opposed to coming up with something textual, and as you well know—you talk a lot about the dirt between light bulbs in Montana—it is kind of hard to send a fire truck to latitude X and longitude Y. It just does not translate very well over the police radio or fire radio.

In 1996, we launched with our partners TruePosition, and at the time Houston Cellular, now Cingular in Houston, the first wireless deployment to demonstrate E–911 location technology, and the technology we started developing in 1994 for the PSAP's was combined with that new wireless location technology that TruePosition brought to the scene, and we actually demonstrated for our board of managers this is doable. At that time, they authorized the funding to upgrade all of our PSAP's and to upgrade our LEC network.

So it is really a matter of good fiscal discipline, good financial planning, and good technological planning, and truly a matter of leadership. If you have leaders that are committed, then you usually have successful teams that work for them, and those teams are usually very good in building the coalition that they need. It was not just us in public safety, it was the local exchange carrier and the wireless carrier, too.

Senator BURNS. Tell me how difficult it was when you dealt with six different wireless carriers that used different technology as their carriers.

Mr. MELCHER. Well, as the years of therapy will prove, eventually, Mr. Chairman, we were very fortunate in that we had the Big Six, if you will, and most of their technologies that are up and running today in Houston are working very well. One of the carriers is a GSM-only carrier, and they are using a technology that has yet to be proven, and they are struggling at the FCC with a request for waivers. We are not terribly sympathetic to that, but the other carriers were very forthcoming in their issues.

What made it easier for us, and I will be honest with you, Senator, you had folks in the carrier community who were willing to come and sit down and say, look, these are our obstacles, we need your help. As a matter of fact, Verizon Wireless, the first to deploy in Houston, came and said, OK, we are going to turn up this location technology, but we are going to route-based on Phase I, the old cell and sector routing, as opposed to Phase II.

Well, we kind of pitched a woollybugger fit, and there are some folks in the room—as a matter of fact, John Scott is here and many of his colleagues who sat down with us and said, explain to us why

this is such an issue. And we have in our jurisdiction 48 cities, and there are 165 public safety agencies, so getting it right the first time and sending it to the right PSAP the first time was incredibly important to us, because that shaves minutes off the call.

They understood our plight. They went back to their vendor. They went back to the third-party provider INTRADO who does the routing for those things, and within about 30 to 35 days came up with a game plan, invited us up to take a look at it, we loved it, approved it, adopted it, and our colleagues that were in the same boat in Chicago and St. Clair County and others in other areas of the country bought off on it, and it was truly a collaborative effort, and I think it was a very good piece of evidence that if sane people, not zealots, but sane, reasonable, thinking people that have solutions in their bag can come and sit down with others of like mind and like capability, you can truly solve these issues.

Senator BURNS. Well, what I was trying to do is help Mr. Tuller out of his dilemma, that we have got the equipment and we do not have the infrastructure to handle them, and sometimes Congress, in fact, more times than not, gets the cart before the horse and does some requirements before really the system is ready to accept them.

I have another question now, one more, and I think it is directed toward Ms. Bradshaw and Ms. Hansen more than anything else. You say training of operators, receivers, this kind of thing, money for these kinds of people. Is it hard to find people who really have the qualifications to be not managers, but just the average person that takes the 911 call? Are those folks hard to find and hard to train?

Ms. BRADSHAW. It takes a very unique individual to be listening to life-and-death calls, and so I would say that the answer to your question is yes, it is difficult to find personnel who will work in the Nation's 911 centers. We have a project that is actually underway called Project Retain, through APCO, that is looking at this very issue, because one of the key things, and this is why my plea to you was for funding, in some cases, the people are not adequately paid.

In some cases, my colleague to the left of me is saying in most cases, it takes pay to be able to support a family and a home, and if there is not adequate pay for these professionals, and it does not come up to the level of other public safety professionals like fire fighters and police officers, it is very difficult to keep an individual. Once they are hired, they may choose to take a different direction in their career, and the reason is for money, so there are dollars.

But on the training side, the training piece of this, so they have the ability to be prepared to do their job, is incredibly important, and, again, it takes resources to be able to train. The centers are staffed 24 hours a day, 365 days a year. Generally, most training is done on an overtime basis in order to keep the consoles staffed to be able to take the calls, so training dollars and overtime dollars are important in every one of the 911 centers' budgets, and it is important resources that I believe the Federal Government could be incredibly helpful with.

Senator BURNS. Jenny, you are in charge of a State-wide project. Tell me your approach to the different counties. We have got 56

counties in Montana. Tell me about your penetration as far as making the plea to the counties and the importance of it, and the importance of interoperability.

Ms. HANSEN. Thank you, Senator. Most of it has been focused on leadership. They look to the 911 program office to guide them in identifying a minimum standard of care in technology and in training.

We have even gone so far as to identify a minimum standard of care through Senate bill 41 that identified minimum training standards for a dispatcher in the State of Montana, and now we are looking toward minimum technology standards for those centers to improve not just basic and enhanced landline services, but embrace wireless in the future, so that once we deploy landline and we go State-wide with that service, we will not be building an obsolescent system to provide wireless in the future.

Senator BURNS. Well, we thank you for coming today, and I think we have found an area where maybe we can affect some change, maybe some funds or awareness. I would suggest that you all call your State representatives that serve in State legislatures, as Mr. Koon does, and to say hey, if you have got the money, we would like to deploy that money. We would like to modernize these communication centers and PSAP's as soon as we can. That is why the money was collected. Let us spend it for that purpose.

And I think I had a couple of calls from other Senators that were not going to make it today. They may have some questions. We will leave the record open, and they will submit those to you in writing. If you could respond to the Committee and the individual Senators, I would certainly appreciate that.

Other than that, we appreciate your coming today and sharing your experiences with us, identifying some areas in which we can be of help, and we hope we just keep working together, because we think it is a very important project, and thank you, and these hearings are closed.

[Whereupon, at 11:45 a.m., the hearing adjourned.]

A P P E N D I X

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. BARBARA BOXER TO HON. JONATHAN S. ADELSTEIN

Question. I believe that an Enhanced 911 system should be a national priority and available to everywhere in America. That may require greater federal oversight. Commissioner Adelstein, what additional resources and authority does the FCC need in order to accept full responsibility for the fast implementation of Enhanced 911 nationwide?

Answer. I share your concerns regarding the prompt deployment of wireless E–911. It may be instructive in responding to your question to also walk through the current procedures for initiating wireless E–911 service.

Under our rules, E–911 implementation is triggered by a mobile wireless carrier's receipt of a valid request for service from a public safety answering point (PSAP) or other requesting entity (e.g., a state-wide or region-wide emergency services board). In order to avoid unnecessary expenditures by mobile wireless carriers, to make a "valid request" a PSAP must be able to show that it has:

- a mechanism in place to fund its expenses
- requested any necessary equipment upgrades and secured a commitment from its vendors that such upgrade will be in place within six months
- made a timely request to the local exchange carrier for any necessary facilities, services or upgrades.

Under this framework, local governmental entities—the PSAPs—in significant part control the pace of E–911 rollout. Where PSAPs are adequately funded, and where there is local (and statewide) commitment to E–911 implementation, rollout has been occurring, and generally speaking nationwide wireless carriers have been meeting their implementation obligations.

Where wireless carriers are not meeting these obligations, the Commission has not hesitated to exercise its enforcement authority over these carriers. We will continue to take strong enforcement action for violation of the E–911 rules, where appropriate.

However, the FCC does not have jurisdiction over state and local funding or management of emergency services support. Under the 911 Act, the FCC is directed to provide support and assistance to states on 911 and E–911 implementation, but is barred from imposing any financial obligations (unfunded mandates) on the states. Thus, without an increase in the FCC's authority to regulate entities that are not its licensees, it would be difficult—if not impossible—for the agency to take on "full responsibility" for the fast implementation of E–911 nationwide.

Given the current regulatory landscape, a more immediately constructive route to full implementation of E–911 nationwide might be for Congress to focus on how to get necessary funding most directly to the PSAPs that need it, rather than on giving the FCC more authority over these entities. I know that the National Emergency Number Association and the Association of Public Safety Communications Officials International both have initiatives underway to work with PSAPs on deployment and funding issues. These organizations probably are well situated to provide Congress with information on the level of funding that PSAPs will require to deploy wireless E–911 on a wide-scale basis.

Local exchange carriers (LECs) also play an important role in wireless E–911 implementation. LECs serve as the 911 system provider in most areas, providing selective routers, trunking, database, and other services necessary for the delivery of E–911. While the FCC does have jurisdiction over local exchange carriers, this jurisdiction is shared with state public utility commissions (PUCs), who generally have authority over LECs' intrastate operations and services. The provision of 911 service by LECs, which is highly localized in nature, has traditionally been overseen by state PUCs, and charges associated with LEC provision of 911 service are governed by intrastate tariffs.

The FCC has not imposed specific requirements on LECs in connection with the provision of wireless E–911, but has indicated that it will consider doing so if a need for such regulation is demonstrated. However, if direct regulation of LECs—with respect to either cost recovery, or other implementation matters—is necessary to accelerate wireless E–911 implementation, a direct and unambiguous grant of specific authority to the FCC to impose such regulation would help to minimize potential legal challenges.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO S. MARK TULLER

Question 1. What can wireless carriers do to speed up the deployment of wireless E–911 location services?

Answer. E–911 implementation is complicated because it requires the capabilities of a number of parties—vendors, wireless carriers, landline carriers and PSAPs—to succeed. Each party has to be absolutely certain that it is capable of delivering the service required when necessary. Verizon Wireless has devoted significant resources to upgrading its nationwide network to be able to provide E–911 service when requested by Public Safety. We have done this in anticipation of requests from Public Safety; we expect that if all other parties involved in the implementation of E–911 were to take similar accountability for their own readiness that nationwide E–911 deployment would be accelerated.

With all parties working together to achieve ubiquitous deployment, undue delays will be minimized. Carriers will continue to work with the PSAPs, LECs and vendors to provide timely service.

Verizon Wireless also intends to fully participate in the FCC's E–911 initiative, which will serve as a clearinghouse for all involved parties to iron out any difficulties in implementation. Moreover, we continue to work daily with individual PSAPs around the country as they move towards Phase I and Phase II readiness.

Question 2. How can wireless carriers ensure that the technology for delivering wireless E–911 location services does not become stagnant, so the quality of information is constantly improving?

Answer. The technology developed for E–911 was only recently developed and thus represents the most current location technology compatible with wireless networks, landline networks, and PSAP infrastructure. Despite the newly-developed technology, innovations are ongoing to improve upon the information delivered and to maximize its utility. At least one industry forum has brought together technical staff from industry and the PSAP community to work on technical issues associated with the provision of E–911.

Verizon Wireless has also worked with individual PSAPs to meet demands for customization, where feasible, and to enhance that PSAP's ability to utilize the location information. The combination of continuous efforts by wireless carriers to improve the quality and robustness of their networks with collaborative efforts to create innovative solutions to problems as they arise will ensure that E–911 technology does not become stagnant. It will be equally important that the components of the "E–911 pipeline" controlled by landline carriers and PSAPs continue to evolve and improve.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO JOHN MELCHER

Question 1. What is the public safety community doing to speed up the implementation of wireless 911 location services across the United States?

Answer. The public safety community is presently engaged in several national projects and initiatives to speed up implementation and stimulate wireless E–911 deployment. These efforts include various public and private partnerships, technical forums and stakeholder groups organized to advance the deployment of E–911. Collectively, they represent the many layers of E–911 implementation and the commitment of the public safety community to our nation's emergency communications system.

The U.S. Department of Transportation (USDOT) Wireless Implementation Program, supported through a partnership with NENA, and the participation of the Association of Public Safety Communications Officials ("APCO") and the National Association of State Nine One One Administrators ("NASNA") is providing a NENA/DOT "Clearinghouse", which includes a number of contracts, agreements and other documents useful to Public Safety Answering Points (PSAPs), wireless carriers and E–911 service systems providers as they implement E–911.

To view the Clearinghouse please visit: *http://dot.nena.org/index.asp*

The Clearinghouse is supported by the Wireless Deployment Profile, a six-month survey conducted by NENA, in which State and county 911 coordinators provided information on readiness of states, counties and PSAPs for wireless E–911.

To view Profile maps and survey information please visit: *http://198.30.105.186/*

Likewise, NENA is supporting the work of APCO's Project Locate, which identifies model communities for E–911 implementation and the Public Safety Foundation of America, which provides grants to individual PSAPs to help speed up E–911 implementation.

Understanding that we as a nation and community are still at a crossroads of implementation, and that specific institutional barriers exist in technology, PSAP readiness and the funding of our nation's 911 system, NENA launched the Strategic Wireless Action Team (SWAT), to examine and address the global and systemic challenges affecting E–911 deployment.

This initiative recognizes that since the inception of 911, the public and private sectors have been partners in developing, enhancing and maintaining our nation's 911 system, but that new solutions and approaches are needed to resolve the myriad of coordination and funding issues related to implementation.

In this process, SWAT recognizes the need to bring together, and engage all the relevant constituents—wireless and wireline telecommunications companies, state and local organizations, subject matter experts, government, executive leadership and public safety—in a cooperative effort to address—*and resolve*—the critical barriers to ubiquitous E–911 deployment.

SWAT is premised on a process to craft a comprehensive systemic recommendation by June of 2003 and to specifically examine the economic, technological, operational, policy and political implications of potential E–911 solutions. SWAT is balancing multiple private interests with public policy goals, and working to achieve a recommendation that all parties can support. The initiative will also reach into individuals States, counties and communities to coordinate, as appropriate, with other national, state and local E–911 related efforts underway.

Question 2. How are you assessing the state of readiness for the public safety answering points?

Answer. In addition to using the tools, resources, and projects mentioned above, NENA, in conjunction with the Alliance for Telecommunications Industry Solutions (ATIS) has established the Emergency Services Interconnection Forum (ESIF) to identify and resolve many of the technical issues related to the interconnection of emergency services and telephony networks.

This past February, ESIF released the "Wireless E–911 Phase II Readiness Package," to further assist PSAPs in E–911 deployment readiness.

The ESIF Readiness Package is a checklist and standard evaluation method for PSAPs to utilize in determining and documenting their status for wireless carriers from whom they request Phase II implementation.

Consistent with the Federal Communications Commission (FCC) requirements for wireless E–911 deployment, the ESIF Readiness Package allows PSAPs to document their readiness and determine the next steps in deploying wireless E–911.

The PSAP Readiness Package, can be found on the NENA website at (*www.nena.org*).

Question 3. What do you think the public safety community needs from Congress, the Federal Agencies to speed up the deployment of wireless 911 location?

Answer. Wireless E–911 represents a fundamental shift in expectations of the public in regards to citizen activated emergency response. No longer is 911 just of local concern—it is global—requiring national leadership and resources to better serve the American public.

Funding our nation's 911 system is not only a challenge in today's world, but also a necessity to enhancing all emergency systems in the future. Closely linked to the issues of implementation and PSAP readiness, the availability of sustained resources and funding to deploy wireless E–911 is of paramount importance.

Unfortunately, in far too many of our nation's communities, wireless E–911 implementation needs are not being met simply because there are enough resources available or that 911 funds collected are not being allocated for 911 use.

As a foundation to our nation's public safety system, we would look to Congress and related Federal Agencies to ensure our nation's 911 systems are properly funded, have access to various federal, state and local resources to ensure timely and efficient deployment of wireless E–911 and remain a priority in our nation's emergency response system.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. BARBARA BOXER TO JENNY HANSEN

Question. What do the states and localities need to compel the wireless carriers and the local exchange carriers to fully cooperate in deploying wireless 911 services?

Answer.

Strong State Programs. Some state 911 programs were established with the statutory backing and authority to be effective in providing leadership and others were not. Attention should be given to strengthening the coordinating and leadership role of the states that lack it, and ensuring that wireline and wireless *911* are under the oversight of a single state agency.

FCC Enforcement. I believe that the majority of wireless carriers are now attempting to cooperate. Monetary penalties from the FCC helped, and the cooperation we see is more indicative of the fear of a hammer than of a genuine industry wide desire to assure *911* service viability. Congress needs to force the paradigm change necessary for essential public services like 911 to be a collaborative effort involving the service providers and agencies that are responsible for public safety response to those who use the services.

Current Networks and New Technology. Wireless public networks are inherently different from the traditional telecommunications networks on which much of the nation's telecommunications technology and policies are based. Wireless carriers are competitive with an economic model that in most cases is the antithesis of the model for the traditional hard line local exchange carriers. They are the forbearers of the telecommunications services we can expect in the future. They are global in nature with the dynamic markets of Earth driving the design and capabilities of their systems, not a national pragmaticenterprise operating as a regulated monopoly. In the next few years they will be competing with hard line carriers who move from regulated to competitive and new concept services whose technology is yet to emerge. In all cases 911 will be an essential service.

A National 911 Program Office. Congress needs to invent a new type of collaboration system that supports the inclusion of 911 capabilities in telecommunications innovation. Telecommunications companies should know what the rules are, and have a mechanism to work through 911 design issues before service is initiated. There should be no doubt that 911 service will be required. But there should also be a permanent capability for solving the issues early in, cooperation with other carriers if appropriate.

At the federal level this capability will need to assure both an interstate capability for 911 call and information sharing, and a mechanism for promoting international standards for abbreviated dialing emergency numbers. 911 has its parallels in other countries, 112 in Europe for example. The numbers are different but the systems handling the telecommunications service are the same with a need to support every country's chosen dialing pattern. Nationally the 911 networks should be ubiquitous with national support for the backbone that makes the system transparent to the carriers and their customers.

The states and local government within the states have an obligation to assure that the 911 systems operate effectively to meet their local requirements. Congress has no place here, other than to assure that every state has adequate coordination capabilities to meet its obligation to work with adjacent states and the federal government. State coordination is essential, both as the federal point of contact and, more importantly, as the link to the local government service providers who ultimately answer the call when 911 is dialed. Dale Hatfield, in his report to the FCC, recommended the creation of a national 911 Program Office. This could serve as the single point of contact for these (and other) issues in this country.

A National Voice. We are asking that Congress make 911 as important a priority for the nation as they have in making sure that the nation has an effective transportation system. There are clear parallels and the Federal Department of Transportation Model may be the best model for the new paradigm of 911 in America. States have a major role in determining when and where the system is built, under clear guidance on the capabilities of off and on ramps. Innovation comes from both the states and federal groups working on new ways to make the highways safer. A federal program that provides small items like a manual for uniform signage make knowing the rules of the road easier while opening an national market for those who make signs. But when you cross Lookout Pass headed from Mullan to Saltese only the signs tell you that you have entered Big Sky Country, the pavement lines up perfectly. 911 needs a similar feel, nationwide.

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