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H.R. 5785, THE WARNING, ALERT, AND RESPONSE NETWORK ACT OF 2006

HEARING

BEFORE THE

SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

JULY 20, 2006

Serial No. 109-125

Printed for the use of the Committee on Energy and Commerce

Available via the World Wide Web: http://www.access.gpo.gov/congress/house

U.S. GOVERNMENT PRINTING OFFICE

30-532PDF WASHINGTON : 2006

For sale by the Superintendent of Documents, U.S. Government Printing Office
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H.R. 5785, THE WARNING, ALERT, AND RESPONSE NETWORK ACT OF 2006

THURSDAY, JULY 20, 2006

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:10 a.m., in Room 2123 of the Rayburn House Office Building, Hon. Fred Upton (Chairman) presiding.

Members present: Representatives Shimkus, Wilson, Pickering, Bass, Walden, Terry, Blackburn, Markey, Wynn, Inslee, Eshoo, Stupak, and Upton.

Staff present: Howard Waltzman, Majority Chief Counsel for Telecommunications and the Internet; Kelly Cole, Counsel; Anh Nguyen, Legislative Clerk; Johanna Shelton, Minority Counsel; and David Vogel, Minority Research Assistant.

MR. UPTON. Good morning. Today we are holding a legislative hearing on H.R. 5785, the Warning, Alert, and Response Network Act, also known as the WARN Act. I want to in particular, thank Mr. Shimkus and Mr. Wynn for introducing this bipartisan legislation and for facilitating discussion of such critical importance on our Nation's emergency alert systems.

As we experience technological breakthroughs on a near daily basis, there is no question that our emergency alert system should also employ the growing technologies of the 21st Century. But as we saw on 9/11 and during Hurricane Katrina, there do exist many shortcomings in our current alert system.

The first national alert system was first employed in 1951 by President Truman, establishing a network that would later become the Emergency Broadcast System to provide the President with a direct means to directly communicate with the public over the radio in times of national emergency.

While much has changed during the days of Harry Truman, the alert system has only expanded to analog radio and television stations as well as wired and wireless cable TV systems.

However, in October of 2005, the FCC expanded the obligations to direct broadcast satellite, digital TV, digital cable, satellite digital audio radio, and digital audio broadcasting services. The 2005 rules go into

effect this December 31, except for the direct broadcast satellite rules, which take effect on May 31, 2007. This is a very important step for our national alert system, but with burgeoning technologies, it seems that more can be done to ensure a greater blanket of coverage for the alert systems.

I applaud the WARN Act for looking at the wireless industry to help bolster our alert system. With nearly 200 million Americans carrying cell phones and other wireless devices it seems only natural to also look to the wireless industry to help communicate in times of emergencies.

This is a priority for the Bush Administration as well, as he issued an executive order just 3-1/2 weeks ago declaring that U.S. policy is "to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people."

What we must strive for is an emergency system that leaves no one behind. I look forward to hearing from our distinguished panel of witnesses to hear how they believe that we can better improve our emergency alert system from coast to coast, ensuring that folks in major urban areas, as well as small rural communities are all notified in times of emergency.

Again, I want to thank Mr. Shimkus and Mr. Wynn for introducing this bill and bringing the important issue to the forefront. This literally is a matter of life and death. Thank you. I yield to the Ranking Member of the subcommittee, my friend, Mr. Markey.

[The prepared statement of Hon. Fred Upton follows:]

PREPARED STATEMENT OF THE HON. FRED UPTON, CHAIRMAN, SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET

Good morning. Today we are holding a legislative hearing on H.R. 5785, the "Warning, Alert, and Response Network Act," also known as the WARN Act. I thank Mr. Shimkus and Mr. Wynn for introducing this legislation and for facilitating a discussion of such critical importance on our nation's emergency alert system.

As we experience technological breakthroughs on a near daily basis, there is no question that our emergency alert system should also employ the growing technologies of the 21st century. But as we saw on 9/11 and during Hurricane Katrina, there do exist shortcomings in our current alert system.

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However, in October 2005, the FCC expanded the obligations to direct broadcast satellite, digital television, digital cable, satellite digital audio radio, and digital audio broadcasting services. The 2005 rules go into effect December 31, 2006, except for the direct broadcast satellite rules, which take effect on May 31, 2007. This is a very

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This is a priority for President Bush as well, as he issued an executive order just three and a half weeks ago, declaring U.S. policy is "to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people…"

What we must strive for is an emergency system that leaves no one behind. I look forward to hearing from our distinguished panel of witnesses to hear how they believe that we can better improve our emergency alert system from coast to coast, ensuring that folks in major urban areas as well as small rural communities are all notified in times of emergency.

Again, I thank Mr. Wynn and Mr. Shimkus for introducing the WARN Act and bringing this important issue to the forefront.

This is literally a matter of life and death.

Thank you.

MR. MARKEY. Thank you, Mr. Chairman. I would like to commend you for calling this hearing this morning on emergency alert systems. As we are in the midst of hurricane season and coming up on the fifth anniversary of 9/11, it is appropriate that we analyze and examine proposals to enhance warnings for citizens when danger is imminent. President Harry S. Truman established in 1951 the first national alert system called CONELRAD, which stands for control of electromagnetic radiation. This system was used amongst other things to prepare young children such as myself in the 1950s to deal with a nuclear attack from the Soviet Union.

At 640 and 1240 on your dial about once every 3 to 4 months the nuns at the Immaculate Conception grammar school would turn on that radio, as we had a coordinated system, and initially we all used to just put ourselves under our desks to protect ourselves against a nuclear blast. And then it was decided we would be better off if all 1,300 boys made it to the basement walking very swiftly but not running so we could get into the basement, all of us, within 2 minutes as the CONELRAD warning went on.

I can say this. CONELRAD worked to the extent to which we were all in the basement. I am not sure it worked in terms of protecting us against the effects of a nuclear blast but that was just a misperception that our leaders had, but on this one they had a good idea. The system evolved into the Emergency Broadcast System and later into the Emergency Alert System or EAS.

The EAS provides the President with the ability to address the American people in the event of a national emergency. It vests sole responsibility to determine when the system is activated at the national level to the President, and the President has delegated this authority to

the director of the Federal Emergency Management Agency. Although the EAS was developed and implemented with the notion that it would transmit presidential messages in times of national crisi,s the EAS has never been activated for a national presidential message. Many significant emergencies potentially afflicting millions of citizens are more localized and occur at the State or regional level.

Moreover, since the EAS system was developed America's telecommunications infrastructure has changed. We no longer rely upon broadcast television and radio for information as we did in previous decades. We now have cable television, satellite radio, the Internet, e-mail, pagers, and over 200 million wireless subscribers across the country using wireless phones and all sorts of wireless gadgets. These devices and communication systems provide our nation with multiple means to reach people in emergencies whether they are at home watching TV, listening to the radio, online, in their car, at their office or walking down the street. The Administration has begun an initiative to explore the use of the public broadcasting system and digital technology to provide alerts across various media and communication systems including wireless devices.

In addition, the FCC is currently working on a proceeding that could wind up mandating that wireless providers implement new alert technology. The wireless industry has raised some concerns about the feasibility of blasting out alerts simultaneously to a specific geographic area. They have also noted the cost of upgrades to existing networks and the prospect of swapping out consumer hand sets at significant cost and suggest that the FCC's action could constitute an unfunded mandate.

On the other hand, it is clear that the Administration is prepared to fund the public broadcast project, and the budget passed earlier this year included over $100 million for this type of system, and also a tsunami warning system. The House Republicans, however, in the Appropriations Committee several weeks ago zeroed out the funding for infrastructure that public broadcasts will rely on to make this new digital Emergency Alert System functional. So it is obvious those members didn't get the same policy alert message the President was sending.

And I think we need an over-arching plan here. Again, this is supposed to be an alert system for occasions requiring immediate public response and action. As a result, I think it is appropriate to revisit the voluntary nature of some pending proposals. As bad as an unfunded mandate would be, it seems equally problematic to spend potentially hundreds of millions of dollars of taxpayer money on a new alert system and a new office in the Government somewhere to administer it and then indicate to industry that they don't have to use it.

This would represent a funded, non-mandate, the worst of all situations. Finally, as we continue to look into these issues and consider any legislative proposals, we also need to look closely at the method for extending credentials to officials permitted to use the system, the criteria for what constitutes an appropriate emergency message, and location and operation of any administrative entity at the national or regional level and the relationship this system will have with other pre-existing complimentary alert or warning systems. Again, Mr. Chairman, this is a very important subject, and I thank you for having the hearing.

MR. UPTON. Mr. Shimkus.

MR. SHIMKUS. Thank you, Mr. Chairman. Thank you for holding this hearing. I want to thank my good friend, Albert Wynn, for his help on this piece of legislation, along with original co-sponsors Mary Bono, George Radanovich, Eliot Engel, and Chip Pickering. And I think that is a good start. This legislative hearing is important to flush out a lot of the questions and see where we are at. I have had a lot of good comments from folks coming in upon the dropping of the bill. I am very optimistic that it will move us in a better direction than we are.

Currently, and as was called upon by the Katrina report, which said we've got to do a better job, there is a lot of technology out there, there are a lot of capabilities. So the real debate is how do you expedite the process, how do you move us forward without doing great harm and slowing up the process, and I think we have reached a pretty good balance. We want to make sure that, one, it is used and it is used appropriately. We want to make sure that those who make those decisions have been well trained to make sure that so you don't get the cry wolf syndrome and people just disregard the alerts.

I look forward to hearing your comments as to how we are successfully doing that or maybe there are possible improvements to make sure that we can move effectively as possible. Last night tornados went through St. Louis, Missouri. I live 15 minutes from St. Louis. Lacey Clay, my good friend, just came in and his St. Louis home was out of power until 4:00 a.m. Parts of my district were left--I mean there is some damage but nothing major.

But the article from the Springfield paper says such was not the case in St. Louis where a section of the roof at Lambert St. Louis International Airport was ripped off, and the windows were knocked out of a rooftop restaurant. Three people were reported injured when a building collapsed in south central St. Louis. This is why we are here. Major events that at least we can get people warned and it is coming down the pike, we ought to use all the technology available. And we should not hinder new technological development by dictating what that technology should be.

So, Mr. Chairman, thank you for the hearing, and I look forward to working with you to move the bill forward.

MR. UPTON. Well, I just want to say to the gentleman from Illinois that I know he is a diehard Cardinal fan despite being from the State of Illinois, and as I understand the turf was ripped up at the Cardinal game last night. All the windows of the press box were blown out. It was pretty serious trouble. I want to at this point put in by unanimous consent an opening statement by Mary Bono into the record, and would yield now to Mr. Wynn for an opening statement.

[The prepared statement of Hon. Mary Bono follows:]

THE PREPARED STATEMENT OF THE HON. MARY BONO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Chairman Upton and Ranking Member Markey, good morning and thank you for holding this hearing today. Additionally, I would like to welcome our witnesses and thank them for participating in this important hearing on H.R. 5785, the "Warning, Alert, and Response Network Act of 2006."

As a representative of a district prone to natural disasters, like earthquakes, fires and floods I am proud to be an original co-sponsor of the WARN Act. If enacted, this legislation would serve to help us better utilize our national communications capabilities for the increased safety of our citizens. This bi-partisan bill, co-sponsored by several members of the Energy and Commerce Committee, is designed to ensure the transmission of alerts across a broad variety of communication technologies, including wireless communications devices such as cell phones and PDAs, the Internet, television and radio, and other communications resources available in the United States. This important step towards improving the safety of our citizens is within our reach.

I think it is important to note that this legislation parallels the recommendations of the FCC's Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks and an Executive Order issue by President Bush this past June. One of the findings of the FCC Independent Panel was "the use of communications networks to disseminate reliable emergency information to the public is critical – before, during and after such events." The Panel also found that our current emergency alert system is not where it needs to be. The Panel's dual emphasis on the alert and instruction is an important aspect of this bill.

Additionally, in President Bush's Executive Order issued in June he stated that the United States policy is "to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people..." The WARN Act supports both of these notions.

To bring this matter closer to home, I recently co-hosted a roundtable discussion in my district with Congressman Ken Calvert. At that roundtable, we discussed preparedness, coordination and the response of the federal, state, tribal, and local government efforts in the event of a natural or man-made disaster. While there were many topics discussed at the roundtable, the issue of providing citizens with information was discussed at length. It is perfectly clear that the greater the number of communications technologies used to spread alerts and instructions, the greater the reach into the public important messages will have. The wisdom of this bill is that it recognizes both the value of information itself and the importance of granting citizens access to information.

As we are all well aware, the ability to alert and instruct citizens before, during, and after the occurrence of a disaster is essential to the public's safety. An emergency alert

system that has the capability to warn citizens of danger *and* provide them with instructions on how to secure themselves and their families has the potential to be the difference between life and death.

I would like to once again thank the Chairman and the Ranking Member for holding this hearing and would urge further action on this important legislation.

Thank you and I yield back.

MR. WYNN. Thank you very much, Mr. Chairman. I would like to thank you for holding this very important hearing on H.R. 5785, the Warning, Alert and Response Network, WARN Act. I would like to begin by thanking my colleague, Congressman Shimkus, for his leadership on this issue. He has done a great job, and I want to thank him for allowing me to be a co-sponsor on this measure. I think it is a very important piece of legislation. He just left, but I also wanted to thank my colleague, Mr. Markey, for bringing back nostalgic memories of an innocent time when we thought that hiding under a wooden desk would save us from a nuclear attack.

Also, finally I would like to recognize my good friend and a true first responder, Sheriff Michael Jackson, from Prince George's County. He has been extremely diligent in providing an effective voice for law enforcement in Prince George's County, and I would also mention that he is an incoming chair of the legislative committee of the Maryland Sheriffs' Association. As a Member of Congress whose district is in close proximity to Washington, D.C., a prime target for terrorism, I am particularly concerned about having an effective alert system. On September 11, 30 of my constituents were killed in the attacks. Many congressional staff and the largest number of Federal workers in the country, 70,000, reside in my district in Prince George's and Montgomery Counties.

Currently, the Emergency Alert System provides emergency warnings only for television and radio broadcast. Unfortunately, the system has not kept pace with our increasingly mobile and wireless society. The WARN Act would establish a network for the transmission of alerts through numerous methods of communication technologies including wireless communication devices such as cell phones and Blackberries, the Internet, digital, analog, cable, satellite television, and satellite and analog radio, as well as non-traditional media such as a public warning siren.

The WARN Act creates a voluntary national alert system to provide the public with a reliable communication system capable of warning the public in the event of a catastrophic event. An important aspect of this bill is that it establishes a national alert system working group which will bring together all parties to establish a reliable, comprehensive approach, implementing a wide-scale emergency alert communication system.

We need this input from the folks on the ground. The bill will provide Federal, State, and local emergency managers with a tool to input alerts into the system and have them directed out to a geographically targeted section of the population as necessary. The White House Katrina report recommended that we should employ all available 21st Century technologies both to update and utilize the National Emergency Alert system in order to provide the general public with advanced notification and instructions for disasters and emergencies. This bill builds on that recommendation.

I believe it remains our goal to develop and maintain a comprehensive emergency management program. Through planning with Federal, State, and local officials and the private sector, I am certain that we can develop a coordinated safety and preparedness strategy to protect life, property, and the environment from the effects of both natural and man-made disasters, including terrorist acts. I look forward to hearing from our witnesses today, and again, Mr. Chairman, thank you for holding this very important hearing.

[The prepared statement of Hon. Albert R. Wynn follows:]

THE PREPARED STATEMENT OF THE HON. ALBERT R. WYNN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. Chairman, Members of the Committee, I would like to thank you for holding this important hearing on H.R. 5785, the Warning, Alert, and Response (WARN) Act. I would like to thank my colleague, Congressman Shimkus for his leadership and allowing me to co-sponsor this bill. I would also like to take this opportunity to recognize one of our witnesses, Sheriff Michael Jackson from Prince George's County, a true first responder. Sheriff Jackson has been extremely diligent in helping to provide effective voice in law enforcement for Prince George's County.

As a Member of Congress whose district is in close proximity to Washington, D.C.- a prime target – I am particularly concerned about an effective alerts system. On 9/11, thirty of my constituents were killed in the attacks. Many Congressional staff and the largest number of federal workers in the country, over 70,000 reside in my district — Prince George's and Montgomery Counties. As evidenced by 9/11 and Hurricanes Katrina and Rita, we need to dramatically upgrade our communications network.

Currently, the Emergency Alert System provides emergency warnings only for television and radio broadcast. Unfortunately this system has not kept pace with our increasingly mobile and wireless society. The WARN Act will establish a network for the transmission of alerts through numerous methods of communication technologies, including wireless communication devices (cell phones, black berries, etc.), the Internet, digital, analog, cable, satellite television, and satellite and analog radio, as well as non-traditional media such as public warning sirens.

The WARN Act creates a voluntary National Alert System to provide the public with a reliable communications system capable of warning the public in the event of a catastrophic event. An important aspect of this bill is that it establishes a National Alert System Working Group, which will bring together all parties to establish a reliable, comprehensive approach to implementing a wide-scale emergency alert communications system. The bill will also provide federal, state and local emergency managers with a

tool to input alerts into the system and have them directed out to a geographically targeted section of the population.

The White House Katrina report recommended that we should "Employ all available 21st Century technologies both to update and utilize the national Emergency Alert System in order to provide the general public with advanced notification of and instruction for disaster and emergencies." This bill builds on that recommendation.

It remains our goal to develop and maintain a comprehensive emergency management program. Through planning with federal, state and local official, and the private sector, I am certain that we can develop a coordinated safety and preparedness strategy to protect life, property, and the environment from the effects of natural and man-made disasters, including terrorist acts. I look forward to hearing from the panelists today.

MR. UPTON. Thank you again for your sponsorship. Mr. Terry.

MR. TERRY. Thank you, Mr. Chairman, and first of all thank you for holding this hearing, and thank you to my two colleagues for drafting what I think is a creative and important piece of legislation to implement what the authors of this legislation intend and grasping--getting our arms around a variety of technologies out there in a creative way of alerting people of imminent danger. This technology, frankly, exists in the commercial markets today and is implemented by large corporations. I represent Omaha, Nebraska, which is a telecommunications services center. Unfortunately, missing in our very esteemed blue ribbon panel here today are the companies that are already doing this large scale.

For example, some executives from a teleservices company, one of the top three in the Nation, Citel International, told me about the technology that they are trying to implement one on one with county emergency services around the country as the ability to reach out and call several hundred thousand people with a recorded message warning them of an imminent danger. They can do that right now. I mean that is their business and they have the software. It is just a matter of who wants that type of service. They can hone in the message, so if you are reaching in Omaha, for example, a Hispanic household that is Spanish-speaking, they can have a warning that is in Spanish or for the 9,000 Sudanese they can break it up into three different dialects. That technology already exists.

And they can have a recorded message saying this is the danger, this is what you need to do. If it is like in New Orleans to evacuate the message can even tell them which routes their part of the city has to use. It can actually determine or they can pre-determine, for example, if there is a disabled person with no transportation that would then alert the authorities that this person is on a list to need extra help in case of an evacuation. This already exists out there so it is a matter of, I think, clueing in our, frankly, Federal government and local governments that this exists, but I think this is creative. Not only can they telephone your

house but they can send it to your PDA, your Blackberry with e-mail messages.

So it exists out there today. I think we just need to make sure that we have a comprehensive plan where this technology that already exists out there is brought into our national emergency preparedness plans driven down of course to the very local levels. So I am very pleased to be part of the hearing. Thanks to all of our witnesses here, and I think the authors of this legislation, Mr. Shimkus and Mr. Wynn, have done a great service to our country.

MR. UPTON. Ms. Eshoo.

MS. ESHOO. Thank you, Mr. Chairman, for holding this hearing, and I want to salute my friend, John Shimkus, and his co-sponsors for writing the bill. He is always thoughtful in these areas. I know firsthand because we have worked closely together as the co-chairs of the House E911 caucus.

I think it is more than appropriate that we consider emergency warning systems so that we can take advantage of modern communications and weave this through our entire communications system.

Very often a good idea just makes so much sense we think, well, why didn't we do this before? I think that this legislation bears that imprimatur. Regardless of where an individual is or what kind of media they may be using, everyone in the country should be able to receive in the most timely way any kind of urgent communications relative to their public safety. We know that we are challenged by natural disasters. We know that there are human made, I don't want to say man made, human made accidents, and then what has been visited upon our country, acts of terror.

We have the capacity to do this, and we have, I think, the finest partners in the private sector that will help to implement this. But what public policy is about is shaping the direction, having the vision, working with the partners, and I have no doubt that we can accomplish this.

I am going to slip in here, you would be surprised if I didn't, that the Congress still has to fund the ENHANCE 911 Act. If in fact we are going to have really a ubiquitous system in the country, the funding of that I think is really essential.

I think most members would still be surprised, certainly the American people would be, to know that when millions of people call 911 that the operators still in so many areas really do not know where that call is coming from. If you don't know where the call is coming from then you can't get help to the person that is calling. That kind of identification I think is absolutely essential. So there are many of us that are still in the trenches trying to make this a reality in our country, and to

those of you that have helped with it, I say thank you to you. We still need your help because the implementation of this important effort in our country has not yet been realized.

I don't think Mr. Bilirakis is here, but we have a bill together, the Calling for 211 Act, that also fits in with part of the effort that is on the table today.

So I look forward to hearing from the witnesses. I want to thank you for all the work that you have done and what you will do. And again my congratulations to the sponsors, and thank you, Mr. Chairman, for having the hearing.

MR. UPTON. Mr. Pickering.

MR. PICKERING. Mr. Chairman, I want to thank you for holding this hearing. I do commend Congressmen Shimkus and Wynn for their leadership on this issue. I look forward to hearing the panel. I do think as our region, my State, recover from Katrina that these types of efforts are critically important as we prepare for future storms and disasters. I think that this is the right approach and the working group that will help all parties, all stakeholders, resolve the different set of standards and come up with appropriate ways to implement these objectives is the right way to go.

I look forward to hearing the panel, and, Mr. Chairman, thank you for holding this hearing.

MR. UPTON. Mr. Stupak.

MR. STUPAK. Thank you, Mr. Chairman, and thanks for holding this hearing. This subcommittee has a strong record of advancing our Nation's public safety and emergency communications. However, it could be stronger if you would just at least allow a hearing on my legislation of public safety interoperability trust fund. No response. Okay. The legislation before us today, H.R. 5785, the Warning, Alert and Response Network Act or WARN Act, will continue in the tradition of this subcommittee. As a former law enforcement officer I know how important it is that our citizens are well informed and have clear direction in the case of emergency.

Out Nation's Emergency Alert System has no doubt saved thousands of lives by giving citizens direction ahead of severe storms. We learned during Hurricane Katrina that emergency broadcast communications can play a vital role after the storm has passed. That is why the efforts of the Federal Communications Commission, industry, and the public safety community to modernize emergency alert systems are so important. People have more ways then ever before to be and remain connected. Blackberries, pagers, cell phones, satellite radio, digital radio, and televisions are all new technologies that can and should be harnessed to ensure that people stay informed before, during and after emergencies.

I commend the FCC for beginning the proceeding to look for ways to expand the Emergency Alert System to these new technologies. I commend Mr. Shimkus and Mr. Wynn for introducing the WARN Act to help us further this effort. Mr. Shimkus and Mr. Wynn's legislation will ensure that there is appropriate redundancy in interoperability in these emergency alert efforts. I also want to note that just as important as emergency communications with the public is emergency communications between the first responders, which is just as important if not more important.

We are already billions of dollars and years behind where this country should be in terms of investing in a fully interoperable public safety communication system. However, we can solve this problem if the committee once again would have hearings and enact a dedicated funding mechanism for emergency communications which would then fund interoperability public safety communications, E911, and emergency alerts. I have introduced such a bill, as I mentioned earlier, that would dedicate a portion of spectrum sales to a public safety interoperability trust fund.

Last year the committee, drawing from my legislation, created a trust fund and made a billion dollar deposit from the DTV auction proceeds, but a billion dollars we all know is a mere drop in the bucket. This committee should now enact legislation to ensure that the country continues to invest in public safety communications by creating a secure dedicated funding source from the trust fund. Finally, I would like to thank our witnesses for coming today to give us their perspective on this legislation. I would especially like to thank Sheriff Michael Jackson, Prince George's County, Maryland, who will tell us a lot about the realities first responders face on the ground. With that, Mr. Chairman, I will yield back my time. Thank you.

MR. UPTON. Mr. Bass.

MR. BASS. Thank you, Mr. Chairman. As our distinguished Ranking Member of the committee says on many occasions, I have a splendid statement that I would like with your permission to submit for the record. Thank you for having this hearing today. Much of what is in this statement has been covered by others, and I yield back.

[The prepared statement of Hon. Charles F. Bass follows:]

THE PREPARED STATEMENT OF THE HON. CHARLES F. BASS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW HAMPSHIRE

Thank you Chairman Upton and thank you to the witnesses for being here today and I look forward to hearing your testimony.

During the Cold War and the proliferation of the atomic bomb, the U.S. created the CONELRAD (Control of Electromagnetic Radiation) which later evolved into Emergency Alert System (EAS) for cases of a national emergency. This system was

created so the President could communicate to as many Americans as possible in a time of crisis to provide assurance and information. Fortunately, the system has never been needed to be used in such a scenario.

Since that time, the EAS has evolved with broadcasters and cable systems voluntarily working with state and local agencies to use the existing system to communicate local emergency messages - such as tornadoes, hurricanes, Amber Alerts, and other emergencies. These have often been successful in getting critical information to citizens, but as we saw with larger disasters such as 9/11 and Hurricane Katrina there is room to improve.

It is important to point out that the nature of the threat has changed since 1951 -to one of terrorist attacking localities or regions - as well as the technology available to people to communicate. Almost -if not everyone in this room has at least a cell phone, pager, blackberry, or other communication devise on them right now. This was unimaginable at the time we first created this emergency system and thus these changes should be reflected in any emergency system.

These various devices make it easier for people to get information wherever they are located even when phone, cable, and electric lines are down. Some parents are even providing their children with cell phones or pagers so they can communicate to them in time of emergency. Information is the best defense in any emergency and H.R. 5785 takes us the next step in taking advantage of the new technologies available to the industry and citizens so there is no issue of interoperability with citizens as well as first responders getting necessary information.

The ability to communicate to the public with an authoritative source is critical to citizens to know what is happening and how to respond in a timely manner. If that communication breaks down - it can lead to loss of life. As we saw with Tsunami, the lack of warning to people resulted in lost of thousands of lives. In New Orleans and other places in the Gulf, lack of clear information caused confusion for many of the evacuees in the Gulf region - as well as amongst those that were there assisting the evacuation and recovery process. Misinformation from various sources caused confusion during evacuation. Even in my state of New Hampshire, we have had two massive floods causing many citizens to evacuate their homes and communities. Some of these towns are very rural and evacuation was made difficult by the flooding out of roads and bridges-sometimes the only way to leave their homes. The ability to communicate to citizens in a certain area of roads washed out and alternate routes would help many of our communities.

I am pleased to see so many stakeholders eager to work together on expanding our emergency communication system and again I thank you for being here.

MR. UPTON. I look forward to reading that splendid statement.

MR. BASS. I also want to commend the Chairman. I do not see anybody from Michigan on this panel. Unusual.

MR. UPTON. I will come back with something in a moment. Ms. Wilson.

MS. WILSON. Thank you, Mr. Chairman. Thank you for holding this hearing. I also wanted to commend my colleagues, Mr. Wynn and Mr. Shimkus, for their leadership on this issue. Most of us remember as kids on Saturdays usually at lunch time, at least it was in my hometown, where they sent that tone over the radio and it said this was a test, this is only a test of the emergency broadcast system. All of us are used to seeing on the--hearing on the radio and then seeing the crawler on the

television that there is a flash flood warning or a fire warning or those kinds of things on television and radio, but we need to get beyond that to new modes of communication, whether it is the Blackberry we carry around on our hips or cell phones or Internet.

And we have already started to see that in a voluntary way with something called the Amber Alert where we are using the emergency broadcast system to alert people in communities about children who might have been abducted. But certain online services like America Online have started using those Amber Alerts and putting them out to their members on America Online so there are possibilities here to expand our emergency notifications and use new technologies to get information to people when they need it most. So I look forward to this hearing, hearing about how the pilot project has worked, what we have learned, what we need to do better, and what legislation might be required. Thank you, Mr. Chairman.

MR. UPTON. Mrs. Blackburn.

MRS. BLACKBURN. I will waive an opening statement. I do want to welcome our witnesses today and thank them for being here, and we are looking forward to some good questions.

[Additional statement submitted for the record follows:]

PREPARED STATEMENT OF THE HON. JOE BARTON, CHAIRMAN, COMMITTEE ON ENERGY AND COMMERCE

Thank you, Mr. Chairman, for holding this hearing today on the "Warning, Alert, and Response Network Act," known as the WARN Act. This is an important public debate, and it is time we start considering the value of advancements in communications and the role that such advancements can play in emergency alerts.

Events like 9/11 and Hurricane Katrina made having a vibrant and robust emergency alert system a priority. In the chaos of a general emergency, people must have a reliable way to receive information about what has happened and get instructions about what to do.

We have come a long way since 1951 when President Truman established the first alert system. Those were the days when television was just arriving and a long-distance phone call was an event in the life of a family. Today, we live in a culture of mobility, where most of us have access to the Internet, millions have cellphones and many carry data devices like BlackBerrys and Treos. With 200 million people in this country carrying wireless devices, it makes sense that when the government needs to alert the public about emergencies, the best way is to get their attention is through the communications devices they carry on them.

In fact, one of the recommendations coming from the White House Katrina Report was that the U.S. should "employ all available 21st century technologies both to update and utilize the national Emergency Alert System in order to provide the general public with advanced notification of and instruction for disasters and emergencies."

The WARN Act, introduced by Reps. Shimkus and Wynn, will create a National Alert System so that anybody with a communications device can be warned. The WARN Act will enable emergency alerts to be transmitted over a broad range of technologies, including broadcast and cable, whether digital or analog, mobile phones, BlackBerrys,

and satellite television and radio. And, importantly, the WARN Act requires the creation of a Working Group made up of government officials and experts in industry and public safety. With the input of all interested parties, we can create a vibrant emergency alert system that is consistent, redundant, and, most importantly, reliable.

I understand that there is a great deal of activity going on in the emergency alert space. As we will hear today, the Federal Communications Commission is currently examining this issue in light of their work with the Emergency Alert System. The Association of Public Television Stations has been working on pilot projects using the existing public broadcasting infrastructure to transmit emergency alerts. I am anxious to learn more about these projects and how they fit into the WARN Act work we are doing today.

I thank Representatives Shimkus and Wynn for their good work on this bill, and the Chairman for holding this hearing. I yield back.

MR. UPTON. That concludes the opening statements from the members. We are delighted with the panel that we have assembled, and I am sure that someone will talk about their roots to Michigan along the way. We are joined by Mr. Julius Knapp, Acting Chief of the Office of Engineering and Technology from the Federal Communications Commission; Mr. John Lawson, President and CEO of the Association of Public TV Stations; Mr. Christopher Guttman-McCabe, Vice President of Regulatory Affairs, Cellular Telecommunications and Internet Association; Mr. Vincent Kelly, President and Chief Executive Officer of USA Mobility; Mr. Billy Pitts, President, Government Affairs, NTI Group, here in Washington, D.C.; Sheriff Michael Jackson, Vice President of the Maryland Sheriffs' Association; Ms. Sara Allen, Senior Radio Engineer for Ciara Enterprises on behalf of the Prometheus Radio Project.

Welcome all of you. We appreciate that your statements came up at the deadline, and they are made part of the record in their entirety, and we would like you to take no more than 5 minutes to summarize your statement, at which point we will then ask questions from our panel here. Mr. Knapp, we will start with you. Welcome. Good to see you.

STATEMENTS OF JULIUS KNAPP, ACTING CHIEF, OFFICE OF ENGINEERING AND TECHNOLOGY, FEDERAL COMMUNICATIONS COMMISSION; JOHN LAWSON, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ASSOCIATION OF PUBLIC TELEVISION STATIONS; CHRISTOPHER GUTTMAN-MCCABE, VICE PRESIDENT, REGULATORY AFFAIRS, CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION; VINCENT D. KELLY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, USA MOBILITY, INC.; BILLY PITTS, PRESIDENT, GOVERNMENT AFFAIRS, NTI GROUP, INC.; SHERIFF MICHAEL JACKSON, VICE

PRESIDENT, MARYLAND SHERIFFS' ASSOCIATION; AND SARA ALLEN, SENIOR RADIO ENGINEER, CIARA ENTERPRISES, INC., ON BEHALF OF PROMETHEUS RADIO PROJECT

MR. KNAPP. Thank you. Good morning, Chairman Upton, distinguished members of the committee. I am Julius Knapp, the Acting Chief of the FCC's Office of Engineering and Technology. I welcome this opportunity to appear before you to discuss the Emergency Alert System or EAS. Since the Cold War era, the United States has had a mechanism in place for the President to communicate with the public in the event of a national emergency. Under the current emergency alert system, all analog broadcast, radio, television and cable systems are required to deliver a presidential level activation of EAS but their use of EAS in response to State and local emergencies, while encouraged, is voluntary.

Effective December 31 of this year, digital television broadcasters, digital cable systems, digital audio broadcasters, and satellite digital audio radio service providers will be required to deliver presidential EAS messages; and effective May 31, 2007, direct broadcast satellite providers will be required to do so. In light of today's Homeland Security threats and potential for natural disasters, the FCC remains acutely aware of the importance of timely and effective warnings.

In addition, there are exciting changes in our communications media that may allow for additional improvements in our warning systems. As a result of these changes, EAS has recently been the subject of much examination. To ensure that we do our part to contribute to an efficient and technologically current public alert and warning system, the Commission is conducting a rulemaking proceeding to consider whether the current EAS is the most effective way to warn the American public of an emergency, and, if not, how this system can be improved.

In an August 2004, Notice of Proposed Rulemaking, the FCC raised broad questions about whether the technical capabilities of the EAS are consistent with the Commission's mission to ensure that public warning systems take full advantage of current and emerging technologies, particularly digital broadcast and wireless telecommunications medium. The Commission also raised the issue of whether the voluntary nature of the EAS at the State and local level has led to inconsistent treatment of emergency alerts across the Nation, and, if so, whether that is appropriate in today's world.

We also considered issues such as what the respective roles of the Federal government department and agencies involved in the implementation of that EAS should be, how the delivery pipeline for

public warning can be made more secure, how it can be tested, how both emergency managers and the public can use and respond to a public warning system in the most effective manner, and how a public warning system can most effectively provide emergency warnings to the disabled community and those to whom English is a second language.

Indeed, a key focus of our inquiry was and continues to be how to reach each and every citizen. In November 2005, the FCC adopted its first report and order and Further Notice of Proposed Rulemaking. In the first report and order, the Commission expanded the reach of the EAS to insure that more Americans are able to receive public alert and warnings by requiring the participation of digital communication systems including digital television and radio, digital cable, and satellite television and radio. In the Further Notice of Proposed Rulemaking, the Commission sought further comment on ways that it could expedite the development of a comprehensive, efficient, and redundant state of the art public alert and warning system.

We have coordinated closely with the Department of Homeland Security and its component, the Federal Emergency Management Agency, or FEMA, and with the National Oceanographic and Atmospheric Administration, NOAA, and its component, the National Weather Service. The Commission values these agencies' continued participation in our review of EAS. We look forward to working with Congress, our colleagues and other Federal, State, and tribal agencies and the public to ensure that we can provide the best possible warning system to our citizens. Thank you, Mr. Chairman, for the opportunity to appear before you today. This concludes my testimony and I would be pleased to answer questions. Thank you.

[The prepared statement of Julius Knapp follows:]

PREPARED STATEMENT OF JULIUS KNAPP, ACTING CHIEF, OFFICE OF ENGINEERING AND TECHNOLOGY, FEDERAL COMMUNICATIONS COMMISSION

EXECUTIVE SUMMARY OF JULIUS KNAPP'S STATEMENT

Since the Cold War era, the United States has had a mechanism in place for the President to communicate with the public in the event of a national emergency. Under the current Emergency Alert System, (known as EAS) all analog broadcast radio, television, and cable systems are required to deliver a Presidential level activation of EAS, but their use of EAS in response to State and local emergencies, while encouraged, is voluntary. Effective December 31, 2006, digital television broadcasters, digital cable systems, digital audio broadcasters, and Satellite Digital Audio Radio Service providers will be required to deliver Presidential EAS messages and, effective May 31, 2007, Direct Broadcast Satellite providers will be required to do so.

In light of today's homeland security threats and potential for natural disasters, the Federal Communications Commission (Commission) remains acutely aware of the importance of timely and effective warnings. In addition, there are exciting changes in our communications media that may allow for additional improvements in our warning systems. As a result of these changes, EAS has recently been the subject of much examination. To ensure that we do our part to contribute to an efficient and technologically current public alert and warning system, the Commission is conducting a rulemaking proceeding to consider whether the current EAS is the most effective way to warn the American public of an emergency and, if not, how the system can be improved.

In an August 2004 Notice of Proposed Rulemaking, the Commission raised broad questions about whether the technical capabilities of EAS are consistent with the Commission's mission to ensure that public warning systems take full advantage of current and emerging technologies, particularly digital broadcast and wireless telecommunications media. The Commission also raised the issue of whether the voluntary nature of EAS at the state and local level has led to inconsistent treatment of emergency alerts across the Nation, and if so, whether that is appropriate in today's world. We also considered issues such as what the respective roles of the federal government departments and agencies involved in the implementation of EAS should be, how the delivery pipeline for public warning can be made more secure and how it can be tested, how both emergency managers and the public can use and respond to a public warning system in the most effective manner, and how a public warning system can most effectively provide emergency warnings to the disabled community and those for whom English is a second language. Indeed, a key focus of our inquiry was, and continues to be, how to reach each and every citizen.

In November 2005, the Commission adopted a First Report and Order and Further Notice of Proposed Rulemaking. In the First Report and Order, the Commission expanded the reach of EAS to ensure that more Americans are able to receive public alert and warnings by requiring the participation of digital communications systems, including digital television and radio, digital cable, and satellite television and radio. In the Further Notice of Proposed Rulemaking, the Commission sought further comment on ways that it could expedite the development of a comprehensive, efficient and redundant state-of-the-art public alert and warning system.

We have coordinated closely with the Department of Homeland Security (DHS) and its component, the Federal Emergency Management Agency, (FEMA), and with the National

Oceanic and Atmospheric Administration (NOAA) and its component, the National Weather Service (NWS). The Commission values these agencies' continued participation in our review of EAS.

We look forward to working with Congress, our colleagues at other federal, state and tribal agencies, and the public to ensure that we can provide the best possible warning system to our citizens.

INTRODUCTION

Good morning, Mr. Chairman and members of the Committee, I am Julius Knapp, Acting Chief of the of the FCC's Office of Engineering and Technology. I welcome this opportunity to appear before you to discuss the Emergency Alert System, or EAS.

An effective public alert and warning system is an essential element of emergency preparedness and such a system requires effective communication and coordination within the federal government, as well as the active participation of the states and the private sector. The Federal Communications Commission (FCC or Commission) has long recognized the importance of securing an effective public alert and warning system and has been working with other Federal agencies, state governments and industry to ensure that the American public is provided with a robust, efficient, and technologically current alert and warning system. This morning, I will review the FCC's recent efforts to improve the Emergency Alert System, a vital component of an effective and redundant public alert and warning system.

BACKGROUND

The forerunner of our current Emergency Alert System originated in the early days of the Cold War when President Truman established the "CONELRAD" system as a means to warn the public of an imminent attack. Since that time, CONELRAD has given way to the Emergency Broadcast System, which in 1994 was replaced by EAS. From the early CONELRAD days to the present, the FCC has played a critical role in ensuring that the President would be able to communicate with the American public in the event of a national emergency. Today, EAS uses analog radio and television broadcast stations, as well as wired and wireless cable systems, to deliver a national presidential message. Digital television (DTV) broadcasters, digital audio broadcasters, digital cable systems and Satellite Digital Audio Radio Service (SDARS) providers

are required to participate in EAS by December 31, 2006. Direct Broadcast Satellite (DBS) service providers must participate by May 31, 2007. National EAS activations would override all other broadcasts or transmissions, national and local, to deliver an audio message from the President. This system is mandatory at the national level, but is also available on a voluntary basis for states and localities to deliver local emergency notifications.

CURRENT OPERATION OF THE EAS SYSTEM

To better understand the issues we face today in modernizing the country's emergency warning capabilities, one should begin with an overview of how the current EAS works. The Federal Communications Commission, in conjunction with the Federal Emergency Management Agency (FEMA) and the National Weather Service (NWS), implements EAS at the federal level. Our respective roles currently are based on a June 26, 2006 Executive Order, 1995 Presidential Statement of Requirements, 1984 Executive Order, and 1981 Memorandum of Understanding between FEMA, NWS, and the Commission.

The Commission's EAS rules are focused on *national* activation and the delivery of a Presidential message. The Commission's rules prescribe: (1) technical standards for EAS; (2) procedures to be followed by communications service providers that are required to participate in EAS in the event EAS is activated; and (3) EAS testing protocols. Under the rules, national activation of EAS for a Presidential message is designed to provide the President the capability to transmit from any location at any time within ten minutes of the system's activation, and would take priority over any other message and preempt other messages in progress.

Currently, only analog radio and television stations, and wired and wireless cable television systems, are required to implement the national EAS. On November 3, 2005, the Commission adopted a First Report and Order that expanded the EAS rules to require that

providers of digital broadcast and cable television, digital audio broadcasting, satellite radio and DBS services provide Presidential EAS messages. Each of these new EAS providers must comply with the Commission's EAS rules by December 31, 2006, except DBS service providers which must comply by May 31, 2007. Other systems, such as paging systems, wireline carriers that provide programming in competition with broadcast and cable television, and wireless providers, including broadband personal communications services and cellular radio telephone services, are not required to participate in EAS.

The decision to activate the national-level EAS rests solely with the President. FEMA acts as the White House's executive agent for the development, operation, and maintenance of the national level EAS and is responsible for implementation of the national level activation of EAS, as well as national EAS tests and exercises.

EAS is essentially a hierarchal distribution system. FEMA has designated 34 radio broadcast stations as Primary Entry Point (PEP) stations. At the request of the President, FEMA would distribute the "Presidential Level" messages to these PEP stations. The PEP stations are monitored in turn by other stations in the hierarchical chain. FCC rules require broadcast stations and cable systems to monitor at least two of the EAS sources specified in their state EAS plans for Presidential alerts. Initiation of an EAS message, whether at the national, state, or local level, is accomplished via dedicated EAS equipment. The EAS equipment provides a method for automatic interruption of regular programming and is capable of providing warnings in the primary language used by communications service providers.

Along with its primary role as a national public warning system, EAS – and other emergency notification mechanisms – are part of an overall public alert and warning system, over which FEMA exercises jurisdiction. EAS use as part of such a public warning system at the

state and local levels, while encouraged, is merely voluntary. Nevertheless, the public receives most of its alert and warning information through the broadcasters' and cable systems' voluntary activations of the EAS system on behalf of state and local emergency managers.

CURRENT ISSUES AND THE FCC'S RULEMAKING PROCEEDING

The introduction of new technologies, such as wireless and digital, has both expanded the options for disseminating emergency information and created gaps in the EAS. In recognition of this situation, in August 2004 the Commission began a rulemaking proceeding to comprehensively review the efficacy of EAS and the role of EAS as part of an overall public alert and warning structure. The overarching question addressed in the Commission's August 2004 Notice of Proposed Rulemaking (NPRM), was whether EAS in its present form was the most effective mechanism for warning the American public of an emergency and, if not, how EAS could be improved.

We sought and received comments from numerous interested individuals, federal entities, state and local emergency planning organizations, and various sectors of the telecommunications industries. Most of the parties who commented agreed that our warning system should be improved, but most – including the Media Security and Reliability Council and the Partnership for Public Warning, two public/private partnerships that have studied the issues extensively – advocate upgrading, not replacing, EAS to take advantage of the existing EAS infrastructure.

In the August 2004 NPRM, the Commission sought comment on whether permissive state and local EAS participation remains appropriate today. The majority of the parties who commented on this issue advocate continuing voluntary participation, at least for the present, while the Commission considers broader changes to EAS. Many of these parties also noted that participation, though voluntary, is widespread. Finally, the Commission sought comment

regarding the appropriate roles of the various federal, state and local government authorities and departments in implementing EAS, regarding security and reliability issues relevant to EAS, and regarding the best way to provide alerts to individuals with hearing and vision disabilities and individuals that do not speak English.

The Commission also asked whether EAS obligations should be extended to services not currently covered, including digital and wireless systems and whether such technologies should be used to combine EAS with other public alert and warning systems to create a comprehensive national public warning system. The majority of commenters that addressed this issue supported efforts to extend the EAS rules to digital communications technologies.

In November 2005, the Commission adopted rules that expanded the reach of EAS to cover the following digital communications technologies that are increasingly being used by the American public to receive news and entertainment: DTV, digital radio, digital cable, satellite radio and DBS. The Commission noted that consumers have increasingly begun to adopt new digital technologies as replacements for analog broadcast and cable systems and that many of these new digital systems had no independent duty to provide EAS or any other alert and warning system to their customers. The rules adopted in the Commission's November 2005 First Report and Order require that DTV broadcasters, digital audio broadcasters, digital cable systems and Satellite Digital Audio Radio Service (SDARS) providers participate in EAS by December 31, 2006. Direct Broadcast Satellite (DBS) service providers must participate by May 31, 2007.

In the Further Notice of Proposed Rulemaking, the Commission sought comment on how the Commission can best help develop a comprehensive next generation alert and warning system that takes full advantage of digital media's potential. The Commission sought comment on the most effective, efficient and robust type of system architecture, specifically asking

whether the legacy EAS system should be retained or whether a new type of system, such as a satellite or Internet-based system, should be implemented. The Commission also sought comment regarding the need for a common messaging protocol to provide consistent alerts across multiple platforms and whether the Common Alerting Protocol (CAP) offers the most practical, effective interface between emergency managers and the multiple alert and notification systems. Further, the Commission sought comment on how it could facilitate the effective integration of wireless technologies into a next generation alert and warning system and whether traditional telephone companies that provide video content to customers' homes in competition with broadcast television and cable television service providers should have public alert and warning responsibilities.

Recognizing the essential role that state governments play in delivering public alerts and warnings, the Commission sought comment on whether its rules should be amended to require EAS Participants to transmit EAS messages issued by the governors of the states in which they provide service. Finally, the Commission sought comment on how the next generation EAS can more effectively reach individuals with hearing and vision disabilities and individuals who do not speak English.

The Commission is currently reviewing comments, meeting with industry representatives, and drafting an order addressing the issues raised in the November 2005 Further Notice of Proposed Rulemaking. We have coordinated, and will continue to coordinate, with DHS and its component, FEMA, and with the Department of Commerce and its component, the National Oceanic and Atmospheric Administration's National Weather Service. We anticipate these federal partners will continue to be active participants in the proceeding.

CONCLUSION

The Commission looks forward to working with Congress, our colleagues at other Federal, state, and tribal agencies, and the public to ensure that we can provide an effective and technologically advanced warning system to our citizens. The FCC is also aware that Congress is taking an active interest in the issue of public alert and warning, and stands ready to provide whatever technical assistance that the Congress would find helpful in this regard.

I thank you, Mr. Chairman, for the opportunity to appear before you today. This concludes my testimony and I would be pleased to answer any questions you and the other members may have.

MR. UPTON. Thank you. Mr. Lawson, welcome back.

MR. LAWSON. Thank you, Mr. Chairman, members of the subcommittee. Mr. Chairman, I would like to say that my wife's mother and sister are from Michigan.

MR. UPTON. I knew it. Make sure you repeat that when Mr. Bass returns.

MR. LAWSON. On behalf of the Association of Public Television Stations, I do welcome this opportunity to participate in the hearing. We have been heavily involved in the development of a 21st Century alert and warning system for the American public and were keenly interested in the subject at hand, so let me begin by saying that APTS strongly endorses the WARN Act, and we commend Mr. Shimkus and Mr. Wynn for their leadership in introducing the bill as well as the members of the committee for co-sponsoring it. And we applaud you, Mr. Chairman, for scheduling this hearing so quickly after the introduction of the bill.

As you know, public television has embraced digital technology. It is enabling us to roll out a new generation of services for the American public. In addition to high definition and multi-casting, we have pioneered a third application made possible by DTV, and that is datacasting. Through our broadcast signal along with our programming, we can send text, graphics, streaming media in the Internet protocol format throughout a wide geographic region wirelessly. For some time we have been discussing our emergency alert capabilities even before 9/11 with officials in the Executive Branch and Congress, and I am happy to say that members of this subcommittee and others are listening as evidenced by this hearing.

In fact, last week the White House, the Department of Homeland Security, and my association, APTS, jointly announced that the Department has committed to funding the build out of a national digital Emergency Alert System or DEAS. Public television will serve as a backbone of a network of networks. This commitment was based on the completion of a successful two-phase pilot project that proved that alerts transmitted and a station's digital signal could be received and re-transmitted on a wide range of media and communications platforms. In other words, it proved interoperability and it supports the President's executive order in this way.

The current EAS as you and others have noted has its roots in the Cold War. What we announced last week is an alert system for the mobile network and digital America of today. Like the current EAS, the digital EAS is designed for the President or his successor to communicate with the American public at a time of national crisis. The WARN Act is the logical next step to DEAS, and that is because it builds upon the new presidential system to provide local, State, and regional alert and warning capabilities as well.

And like DEAS, the WARN Act recognizes a huge cost-effective dual use opportunity for the Federal government. Public stations have raised over $1.1 billion for the conversion to digital with about one-third

of that coming from Federal sources. As a result of this investment, public stations have the digital infrastructure in place today to serve as a dual-use backbone for the national alert system authorized under WARN. Please allow me to provide an overview of our capabilities.

We have 356 public television station transmitters in this country and many translators are 100 percent interconnected via the PBS satellite network. These are locally owned, non-profit institutions. Public television reaches 99 percent of the U.S. population, about 95 percent now with our digital signal. Mr. Chairman, our system was built for universal service and we deliver it. And DTV datacasting has many advantages to this system. DTV is really a very powerful wireless data distribution platform. It provides total scalability. It is designed for mass distribution. We can reach a million receivers as easily as one without any of the congestion we saw with cell line and phone lines during 9/11.

It is a receivable and inexpensive receiver device. We are talking about $40 under the television receiver subsidy program. It can be addressed to selected receivers and encrypted on a need to know basis. Just a brief look at the dynamics of the bandwidth allocation. This is a representation of an American digital television signal and you can see that high definition does not take the whole bandwidth. You can dedicate some of the bandwidth for data transmission. You can find other data opportunistically. Typically we are using only less than a megabyte per second in our emergency alert projects.

So let me transcribe the architecture of our pilot project, which will be the basis for the actual deployment and the demonstration we want to conduct for you in just a moment. One of the--at the upper left is the Department of Homeland Security. In the pilot, they have originated test messages which are sent on a dedicated line to the PBS satellite operations center in Springfield, Virginia. The satellite without anyone touching it, no one at the station or PBS touches these messages, they are simply passed through digitally. Stations receive the signal off the satellite. In this case, WETA received it and retransmitted it simultaneously. These alerts were picked up by a variety of media including cell carriers, paging companies, satellite radio, and other broadcasters and we sent it to stations around the country.

One of the hallmarks of the pilot project was the large number of partners we had in the public and private sectors, Federal agencies here, all sorts of private media and communications carriers. Because of the success of phase one, DHS funded us to expand the project and conduct phase two, which came to 24 public stations participating in this project. Mr. Chairman, we commend the WARN Act for its goal of creating a truly integrated national alert system. This commitment of $106 million

will go a long way toward providing the kind of system that the American people need and deserve.

We do have some questions about the funding mechanism through WARN. We are concerned that our stations would incur the cost of installing the equipment and then have to be reimbursed. We hope to discuss that with you and members of the subcommittee. But we are deeply gratified to see this legislation moving forward. Digital public television stands ready to provide the backbone of a network of networks that can deliver instant warnings to people wherever they are or whatever they are doing.

And now, Mr. Chairman, with your permission we will be happy to conduct a live demonstration of the digital Emergency Alert System.

MR. UPTON. Fire away.

MR. LAWSON. Please let me go back to the schematic and describe what you will see and hear rather then me talking over the test. FEMA will originate a live test message and send it to the PBS facility in Springfield. It will be up linked with video satellites. We can also provide live streaming media and audio.

MR. UPTON. I will just note that it just came over my Blackberry just now.

MR. LAWSON. And we can ring cell phones and Blackberries. So radio and newscasts receive the audio portions of this alert live off of WETA and are retransmitting it so that is what you are hearing with a slight delay coming off their satellite. You can also see, we are seeing this through a computer browser through this server, which is connected to a small indoor antenna in the window and the DTV tuner part is built into this device inexpensively. Along with the alert and the audio and video, we are sending files that are building here that we can delete and reload. This is just hypothetical information. It could be sent by the authorities to police departments or the sheriff's departments or hospitals in addition to the alert that the public is receiving, so this is a highly flexible and robust system.

In this test today, we did set off cell phones for those of you who gave us your numbers. We used the Internet for this through software developed by Specter Rep called Alert Manager, but in the pilot project here in the National Capital region the cellular providers actually took the signal off air from WETA and retransmitted the text messages from that. So we can repeat this test if you would like at some point, a lot was happening, but we are doing this with commercial off the shelf technology. There is nothing really exotic about this, but even though we can encrypt some of the data on a need to know basis. So this concludes my oral testimony. I am happy to answer any questions you may have.

[The prepared statement of John Lawson follows:]

PREPARED STATEMENT OF JOHN LAWSON, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ASSOCIATION OF PUBLIC TELEVISION STATIONS

Mr. Chairman, Ranking Member Markey and members of the Subcommittee, thank you for this opportunity to testify before you today.

On behalf of the Association of Public Television Stations (APTS), I want to offer our strong support for the creation of a national hazard alert system under H.R. 5785, the Warning, Alert, and Response Network (WARN) Act. We commend Representative Shimkus, as well as the co-sponsors of the WARN Act, for their leadership in this vital area. And I applaud you, Chairman Upton, for so swiftly scheduling this hearing.

Public Television's digital infrastructure is being harnessed to play a central role—a dual-use role—in the development of a new, robust and efficient national digital emergency alert and warning system. Digital public television is providing the backbone for what can become a network of networks that delivers instant warnings to people wherever they are or whatever they are doing. This is a system that can reach the mobile, networked, and digital America of the 21st Century.

For Public Television, the creation of a national alert system is a component of a much larger mosaic of how digital technology can be deployed. We are utilizing DTV not only to improve the lives of all Americans, but even to *save their lives* in the event of a natural or man-made emergency. Public Television is proud to be at the leading edge of this effort, through the Digital Emergency Alert System, which I appreciate the opportunity to demonstrate this for you.

Public Television strongly endorses the WARN Act for several reasons. First, it provides a broad national framework that also enables local participation. Second, it authorizes meaningful funding to carry out its goals. Finally, it harnesses the expansive potential of digital technology—namely, DTV datacasting—to create a system that will be comprehensive enough to address national disasters and flexible enough to respond to local and regional events.

This hearing is timely. Congress has devoted considerable time and effort to examine the response and recovery efforts in the aftermath of Hurricane Katrina. Among the conclusions that have emerged is a broad consensus about the need for an integrated, interoperable and flexible alert and warning system. Additionally, on June 26, the President issued an executive order, (EO-13407) that directs federal agencies to develop such a system. And I'm proud to say that Public Television, working directly with the Department of Homeland Security, has already been playing a central role in the

development and testing of some of the key technologies that can bring the goals of WARN and the President's executive order to fruition.

DHS Announces National Roll-Out of Digital EAS (DEAS)

Last week, in fact, the Department of Homeland Security announced that, based on a successful, two-phase pilot, the Department is committing $5 million to fund the initial build-out of a national Digital Emergency Alert System (DEAS). Specifically, this build-out will provide presidential emergency messaging capability—what we call Interim Operating Capability—for national emergency messages. The pilot on which this decision was based, The National DEAS Pilot Project, was the result of a cooperative agreement between DHS and APTS. It spanned 18 months of real-world testing and involved a wide range of public and private partners, from local and national public broadcasting entities to providers from the wireless, cable and electronics industries.

The National DEAS Pilot Project is described in greater detail below. The bottom line, however, is this: we have proven that, using digital datacasting technology, we can provide the foundation for a national, integrated, interoperable presidential messaging and alert and warning system. We can also build out this system highly cost-effectively. That's because our local public stations have raised over $1.1 billion for their conversion to digital broadcasting. Thanks to that investment by local communities, state legislatures, and Congress, public television stations have the digital infrastructure in-place today to provide a backbone for this next generation alert system.

The Department estimates that once the $5 million build-out is complete, it will cost $1 million annually to operate the system. I would submit that given the tremendous value of enabling the President to communicate with the American people at a time of crisis, this price tag is nothing short of a bargain. But it demonstrates that investments in dual-use technology and partnerships with local community institutions—like public broadcasters—can yield impressive returns.

I was pleased to be joined by R. David Paulison, the Director of FEMA, as well as Kenneth Rapuano, Deputy Assistant to the President for Homeland Security, for last week's formal announcement. The announcement took place at the studios of WETA in Arlington—an invaluable player in the pilot.

Digital Emergency Alert System: DEAS

In October 2004, APTS signed a cooperative agreement with the Department of Homeland Security, through FEMA, to design and test an integrated national public alert and warning system using Public Television's digital transmission infrastructure. This system, the Digital Emergency Alert System, is conceived as the foundation for an all-devices, all-hazards, digitally-based emergency alert and warning system. This includes

the distribution of presidential messages to the public through TVs, radios, personal computers, telephones and wireless networks.

The National DEAS Pilot Project was conducted over two phases. Public broadcasting participants in Phase I of the pilot included APTS, the Public Broadcasting Service (PBS), WETA-TV and FM, Maryland Public Television, WHRO (Norfolk, VA), KAKM (Anchorage, AK) and the New Jersey Network. These Public Television entities were joined by WTOP-AM radio, WRC-TV (both in Washington, DC), Comcast Cable, the National Cable & Telecommunications Association (NCTA) and XM Satellite Radio. Participating telecommunications industry organizations include Cingular Wireless, Nextel, T-Mobile, the Cellular Telecommunications and Internet Association (CTIA) and USA Mobility, among others.

Phase I of this pilot project focused primarily on testing whether emergency alert and warning messages could be successfully transmitted to other media and networks, then retransmitted in a workable format—known as the Common Alerting Protocol (CAP). The Pilot was formulated around the concept of real-time activation by FEMA of simulated emergency alert and warning messages through the PBS interconnection system to WETA, who redistributes the alert messaging to other participants in the pilot.

Phase I of the pilot project was a resounding success. We were able to demonstrate that this infrastructure works and works well. (For a more detailed report, please refer to Appendix A, The Interim Report to Congress of the DEAS-NCR Pilot Project.)

Our demonstration shows how the process works. First, FEMA transmits an alert message to the PBS Technical Operations Center over a secure line. Next, PBS distributes that message via satellite uplink to the target public television transmitter (in this case WETA), which then automatically datacasts the message on its DTV transmitter, to be received by any number of wireless devices. (A diagram of this procedure can be found in Appendix B.)

Phase II of the National DEAS Pilot

Based on the success of the first phase of the national pilot, the Department of Homeland Security extended the pilot to lay the foundation for the national roll-out of a digitally-based federal public safety alert and warning system.

Phase II had three major components.

- **Additional testing and evaluation:** Phase II expanded testing sites, including additional state emergency operations centers (EOCs), and incorporating another 19 public broadcast stations outside the National Capital Region.

- **Coordination with other alert and warning pilots and vendors:** This included a pilot that DHS is developing to provide satellite connectivity to the nation's current

Primary Entry Point (PEP) stations. These other pilots are also consistent with DHS's goals for an Integrated Public Alert and Warning System (IPAWS) framework. The goal here is to ensure that a DEAS can work with, and be complementary to, other aspects of an improved national alert and warning system.

- **Development of a DEAS National Deployment Plan:** The DEAS National Deployment Plan includes construction and timeline estimates, technical risk determinations and other technical implementation options.

Phase II confirmed the proof of performance from Phase I, but on a larger and more complex scale. (For a complete list of participants in the pilot, including local Public Television stations, please see Appendix C).

Lessons Learned from the National DEAS Pilot Project

The Pilot Project revealed and/or confirmed several key facts about building a national alert and warning system:

1. **Datacasting is an effective and robust technology**. Datacasting provides a platform that is secure, flexible, scalable and congestion-free. As such, it has the potential to solve many of the problems, such as bottlenecks, that have plagued emergency communications in the past.

2. **Integration and interoperability are within our grasp**. By adopting the Common Alerting Protocol (CAP), the pilot demonstrated that it is possible for alerts to span not just geography but more importantly, myriad devices. The CAP, built on an Internet Protocol framework, permits devices to communicate seamlessly under a common "alert language."

3. **Alert and warning systems need not be built from scratch.** Most of the components of the system tested already exist. We used open standards and commercial, off-the-shelf equipment. Full build-out of a national system requires a modest investment, and the funding provided in the WARN Act would go a long way toward augmenting and expanding these capabilities within states and localities.

The New DEAS Improves on the Old EAS

While I've discussed what we are doing with national alert and warning, it bears mentioning why and how we are doing what we are doing. The current EAS system has its roots in the Cold War and is limited to two basic reception devices: radios and televisions. And yet today, Americans have become fluent in an impressive array of other—often, more portable—devices, including cell phones, personal computers, Blackberries and other PDAs. Under digital version of the EAS that we piloted, the

President could potentially reach almost all Americans quickly with an important message delivered to any one or all of these devices.

It is also important to note that the current EAS was conceived to provide warning for threats that were national in scope – namely, a nuclear attack. Today's most feared threat, acts of terrorism, are by their nature more local or regional in scope, as the residents of New York, Washington, Madrid, London, and most recently, Bombay, can attest. Moreover, as we are painfully aware, threats from natural disasters can arise with little or no warning, leaving local and regional devastation in their wake. That is why the new DEAS will provide a backbone that can be interconnected to deliver alert and warning at the local, regional and national levels.

Role for Public Television

Public Television is a mission-driven institution. When our system was faced with the prospect of undertaking a daunting conversion from an analog to digital transmission platform, we naturally began to explore the many ways that this exciting new digital technology could be used to benefit the American people. With the emergence of a digital broadcasting application called datacasting, we quickly grasped that local digital public television stations could play a role in enhancing public safety. At first the idea focused on natural disasters such as tornadoes. And then came 9/11.

The other critical feature of the Public Television system is our unparalleled reach: nearly 99 percent of American households can receive our analog service. We already reach approximately 95 percent of households with our digital service, and that percentage will continue to grow. Indeed, our system's breadth is impressive, but so is our depth. We are deeply rooted in our communities, typically among the most trusted local institutions and ones that have forged strong linkages to other community institutions and populations.

Next Steps: The WARN Act

The Department of Homeland Security has made an investment in an infrastructure platform that would support regional and local emergency communications. However, the scope of their commitment at this juncture is focused on the national, presidential messaging system. That is where the WARN Act comes in.

We are pleased that the WARN Act, H.R. 5785, sets forth a national emergency alert and warning system based on the digital infrastructure of Public Broadcasting as its platform. But we particularly support the scope of the WARN Act—namely, to bring these emergency communications capabilities, across multiple devices, to states and localities throughout the country. What the Department of Homeland Security is undertaking will probably involve receive sites numbering in the hundreds. With funding from the WARN Act, it would be possible to begin a phased, full implementation of these capabilities in local communities—achieving points of distribution numbering in the tens of thousands.

We're talking about first responders, local hospitals, schools, Red Cross centers, places of employment.

The capabilities of datacasting far surpass simple text messages. Large, robust packets of information—such as, for example, medical treatment protocols in the event of bioterrorism—could be transmitted to the people and organizations that will be on the ground dealing with the aftermath of a crisis.

The WARN Act's commitment of $106 million for emergency communications capabilities will go a long way toward providing the type of comprehensive, integrated public safety communications framework that the American people need and deserve. If the aftermath of Hurricane Katrina has taught us anything, it is that we are all vulnerable in a time of crisis.

I would like to applaud Representative John Shimkus for his leadership in introducing the WARN Act, as well as his committee colleagues who have cosponsored the measure—Representatives Bono, Wynn, Engel and Radanovich—along with other Members of Congress. We believe the WARN Act will prove to be a pivotal piece of legislation, one that can save lives, ease suffering and speed recovery during future disasters.

Satellite Interconnection and Station DTV Transition

I'd like to also mention an issue that is related to the DEAS build-out, and that is the replacement of Public Television's satellite interconnection system. As you are probably aware, national programming is currently distributed from PBS to the more than 350 local public television stations via a satellite interconnection system. That aging system is scheduled to be phased out starting in October.

We are pleased that Congress has funded three of four installments for a replacement, Next Generation Interconnection System over the past three appropriations cycles, enabling PBS to build out the central architecture of the next generation system. Continued appropriations in FY 2007 are extremely important, however, to complete the build-out of the interconnection system, particularly at the local level. This is relevant to the subject of today's hearing, because the same infrastructure that ensures distribution of national programming also forms the backbone for distribution of emergency alert and warning messages under DEAS. Moreover, this Subcommittee has jurisdiction over both Public Broadcasting and, specifically, satellite interconnection.

We were disappointed that the House Appropriations Committee elected to exclude funding for the final installment of the Public Television satellite interconnection system. The Committee also excluded funding needed by our stations to complete the digital transition of their terrestrial facilities, which makes possible our ability to datacast alerts locally and regionally. We urge Members of this Committee, in your role as authorizers of these programs, to convey your support of these line items to your colleagues on the Appropriations Committee. The dual-use value of digital public television is lost if the basic system remains unfinished or is allowed to deteriorate.

Public Telecommunications Facilities Program

Finally, I would also like to mention the Public Telecommunications Facilities Program (PTFP), which is also under this committee's jurisdiction. As many of you are aware, PTFP is a competitive, matching-grant program that is the only long-term source of funding for the acquisition and replacement of public television and radio station equipment. It is also the only program to which stations can turn in an emergency. For example, when Katrina destroyed transmitters and towers in the Gulf, PTFP was there to supply emergency grants to quickly replace that infrastructure. Thousands of citizens in the area depended on local public broadcasts for critical information both prior to and in the aftermath of Katrina—such as evacuation routes, where to secure supplies and how to access other forms of assistance.

This year, PTFP is considering many applications for back-up generator equipment in disaster-prone regions, such as the Gulf Coast. Moreover, we are aware that Mississippi Public Broadcasting has an application pending at PTFP to fund half of the costs to replace antiquated radio transmitters. The transmitters in question are the very same ones that provided evacuation route advisories to citizens before Katrina made landfall and lifesaving information such as where to obtain drinking water following the storm. In some areas these were the only broadcasts to which the local population had access.

PTFP has received modest but stable appropriations at approximately $22 million for the past three fiscal years. Demand for grants has outstripped availability of funds by a margin of up to two-to-one during that period. In addition, 114 Members of the House signed a letter of support for Fiscal 2007 funding for PTFP this year. Yet despite the demonstrated need and widespread support, the Appropriations Committee recommended zero funding for the program, which was later approved by the full House.

We urge Members of this Committee, again in your role as authorizers of this program, to convey your support for PTFP to your colleagues, in this case to those who will be serving as conferees for the final Fiscal 2007 State, Science, Justice and Commerce bill.

Conclusion

Public Television is gratified that we can play a role in helping to shape our nation's next generation emergency alert and warning system, and most importantly to deliver that capability. It is a natural extension of our public service mission. We believe that one day in the near future Public *Digital* Television will play a crucial role during a crisis that will save lives and calm fears.

Thank you for giving me the opportunity to testify today. I look forward to any questions or comments you might have.

Appendix A

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

FINAL REPORT TO CONGRESS

DIGITAL EMERGENCY ALERT SYSTEM – NATIONAL CAPITAL REGION PILOT PROJECT

Introduction

In accordance with the House of Representatives Report for the Fiscal Year (FY) 2005 Department of Homeland Security Appropriations Bill (Report 108 – 541), this final report describes the findings of the Department of Homeland Security, Federal Emergency Management Agency (FEMA) and the Information Analysis and Infrastructure Protection (IAIP) Directorate, in consultation with the Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), the Federal Communications Commission (FCC), and the private sector, of a Digital Emergency Alert System (DEAS) demonstration pilot conducted in the National Capital Region (NCR). Because actual DEAS pilot testing did not begin until mid January 2005, the Department requested, and was granted by the Committee, an extension of the time to file a report. As a result, an interim report was provided to the Congress on May 13, 2005.

Legislative Language

The House of Representatives Report for FY – 2005 Department of Homeland Security Appropriations Bill (Report 108 – 541) directed the Emergency Preparedness and Response Directorate to provide a report to the Congress on the findings of a demonstration project using new public television digital broadcasting technology to provide alert and warning to the public.

Specifically, the report directs the Emergency Preparedness and Response Directorate as follows: Secretary of Homeland Security to report to Congress as follows:

> *NATIONAL EMERGENCY COMMUNICATION SYSTEM. The Committee is aware that new public television digital broadcasting technology is currently available to provide a secure, time – sensitive communication system for federal, state, and local governments in the event of an emergency. Since the digital television signal is transmitted wirelessly, the data is not subject to downed telephone lines, clogged cellular services, or Internet hackers. The Committee is also aware of several demonstration projects, including one in the National Capital Region, assessing this technology. The Committee directs the Emergency Preparedness and Response Directorate to provide a report no later than January 31, 2005, on the findings of this demonstration program.*

This report is submitted to Congress in compliance with this request.

Objectives

The main objective of the DEAS pilot was to test the concept of real-time dissemination by FEMA of simulated Emergency Alert System (EAS) messages into the digital satellite interconnection network of the Public Broadcasting Service (PBS) and the local public television member station, WETA. FEMA's specific objectives were:

- Transmission from FEMA of simulated text, audio, and video EAS messages in the Common Alerting Protocol (CAP) format[1] during a specified test schedule.
- Encapsulation of these test EAS messages into the PBS satellite signal and the WETA digital television signal.
- Receipt of the simulated EAS messages within the NCR – via WETA's Digital Television (DTV) signal – by participating media and telecommunications companies and government agencies to include FEMA, NOAA, and the FCC.
- Retransmission and receipt of the EAS test messages over commercial networks in the NCR, to enable receipts on cell phones, pagers, computers, and TVs.
- Receipt of the DEAS test messages by participating public broadcasters outside the NCR – via the PBS satellite signal.
- Passing the previously encapsulated data into the respective DTV signals of the participating public broadcasters outside the NCR.

Background

The DEAS pilot included a wide range of participants from government, radio and TV broadcasters, cable television providers, and wireless telecommunications industries. Coordination of the DEAS - NCR pilot was the joint responsibility of FEMA and the Association of Public Television Stations (APTS). Other key federal entities participating in the pilot included DHS-IAIP, the FCC, and NOAA.

Media industry organizations participating in the pilot included APTS, PBS, WETA-TV and FM (Washington, DC), Maryland Public Television, WHRO-TV (Norfolk, VA), the New Jersey Network, WTOP-AM (Washington, DC), WRC (Washington DC), Comcast Cable and XM Satellite Radio. Also observing was the National Cable and Telecommunications Association.

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[1] The Organization for the Advancement of Structured Information Standards (OASIS), a not-for-profit, international consortium that addresses the development, convergence and adoption of e-business standards, has adopted the Common Alerting Protocol (CAP) as an OASIS standard. CAP is a standardized, non-proprietary, data interchange format that simultaneously disseminates consistent all-hazard emergency alerts or public warning messages over different kinds of communications networks and systems, including those designed for multilingual and special needs populations. The CAP format is compatible with emerging and existing formats, such as web service applications, NWS' SAME, and the EAS protocol and offers a number of enhanced capabilities.

Participating telecom industry organizations included Cingular Wireless, Verizon, Nextel, T-Mobile, and USA Mobility. Also observing for the wireless industry was the Cellular Telecommunications and Internet Association (CTIA). A number of systems and technology companies have also participated in the pilot and provided support and equipment, including, SpectraRep, Qualcomm, Kencast, Logic Innovations, Triveni Digital, Hormann America and others.

During the course of the pilot project, and as part of the continued forward progress of a DEAS, additional participants were added to include the Department of Justice, The Weather Channel, and Sprint.

DEAS Pilot Project Findings

The DEAS pilot project has successfully demonstrated how the capabilities of America's public broadcasters can be utilized to dramatically enhance Federal, State, and local governments' ability to provide the American public with critical, lifesaving alert and warning information. Significantly, through the voluntary cooperation and full participation of public and commercial broadcasters, satellite radio, the cellular telephone industry, technology developers, pager service providers, cable operators, and others, FEMA has successfully demonstrated an ability to transmit a variety of alert and warning messages via digital television and satellite to a full range of retransmission media using CAP.

The benefits of a nationwide DEAS, as part of the Federal government's Integrated Public Alert and Warning System (IPAWS), may include:

- Providing an interoperable system that compliments and augments FEMA and DHS efforts to expand, harden, and upgrade the EAS Primary Entry Point (PEP) system for assured Presidential level communications to the nation before, during, or after a catastrophic incident on the homeland.

- Serving as a component of the IPAWS to provide Federal, State, and local emergency managers and leaders with the tools they need to alert America about both man–made and natural disasters, AMBER Alerts, terrorist threats or national emergencies.

- Providing hard–to–reach rural communities with an alert and warning capability.

- Building upon public television's Congressionally mandated digital conversion, a DEAS system may provide more States with the ability to capitalize on digital datacasting to establish a statewide public safety alert system, linking State and regional public safety and emergency management agencies.

- Providing improved alerting to people with disabilities and to those who need alerting in languages other than English.

- Improving the likelihood of timely warning message receipt to a wide range of electronic devices, to include cell phones, pagers, TVs, radios, and computers.

During the six month DEAS – NCR pilot some technical challenges were identified and will continue to be addressed as we progress with a nationwide DEAS. Two major technical concerns included:

- Identification and development of software and hardware solutions that will allow the unhindered passage of an emergency message, in CAP format, from an authorized message originator, through public television's digital signal, to a retransmission media (satellite radio, cellular telephone provider, etc...) to the general public.

- Identification and development of software and hardware solutions that will ensure DEAS interoperability with existing alert and warning systems in use by State and local emergency managers.

Through the active involvement of all DEAS pilot participants and the open dialogue between public and private sector representatives involved in the project, some policy concerns were presented. The major areas of concern were:

- Lack of a national alert and warning policy that identifies a clear vision for the nation's next generation alert and warning system.

- Liability of carriers for the retransmission of emergency alert and warning messaging and assured authentication of message originators.

- Mandatory versus voluntary carriage of emergency messages.

Follow – On Progress

Building upon the success of the DEAS pilot, FEMA and IAIP have begun a second phase expansion of DEAS testing which will replicate the experience in the NCR at other sites across the country using public television's existing digital infrastructure. The objectives of this second phase will be to:

- Develop and demonstrate a prototype national DEAS capability for an all hazards digital alert and warning system.

- Identify additional technology and policy challenges and develop a plan to address each area of concern.

- Develop an implementation plan for a nationwide DEAS that is interoperable with existing systems and is a component of the IPAWS solution.

In addition to the objectives for the second phase expansion of DEAS testing, we have made progress in other areas related to a next generation alert and warning system using our IPAWS approach. Some highlights include:

- The establishment of the White House Task Force on Effective Warning, chartered by the Office of Science Technology and Policy and co–chaired by DHS and the Department of Commerce, which is working to develop a national alert and warning policy.

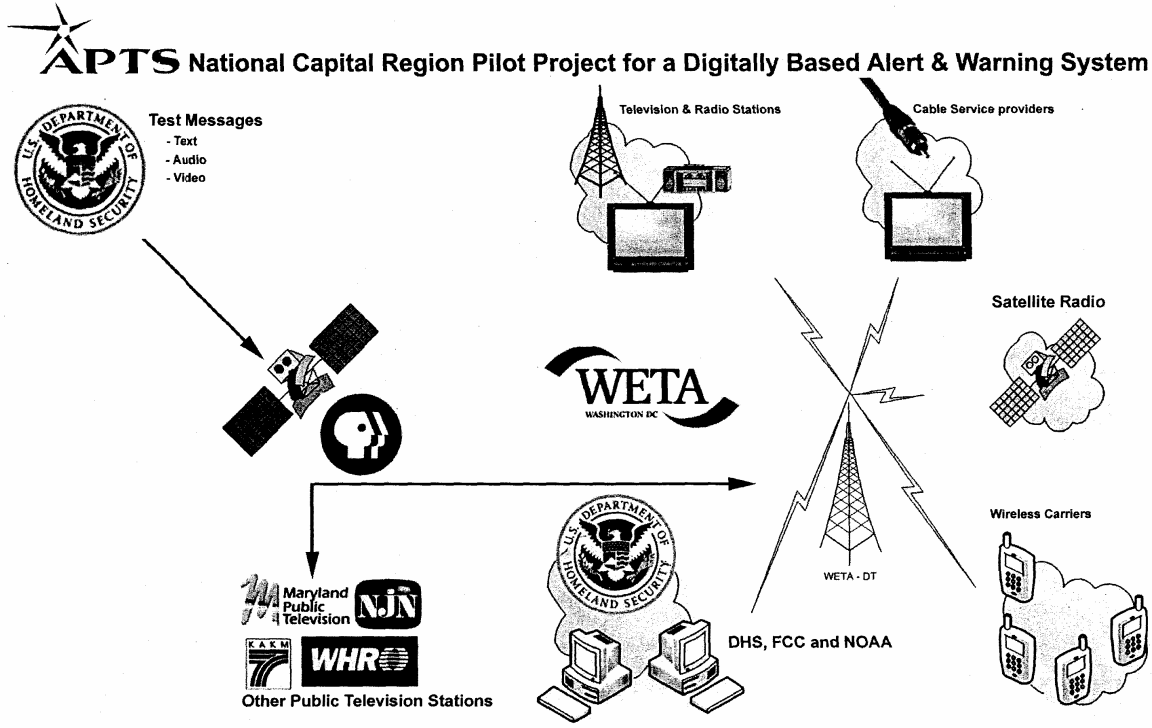
- Last year's release of the FCC's Notice of Proposed Rulemaking with regard to the Emergency Alert System. We believe that the FCC's efforts in this matter will help us strengthen and improve alert and warning for the general public.

Conclusion

DHS takes seriously its responsibility to ensure the quick and accurate dissemination of alert and warning information to our homeland security partners and the general public. As such, we have made significant progress toward improving, and building, an enhanced capability to provide nationwide alert and warning using cutting edge technologies, in an integrated and coordinated manner. The DEAS – NCR pilot has aptly demonstrated how digital public television can serve as a catalyst for a next generation national all–hazards alert and warning system.

Because there is not a single system that can meet all of the alert and warning requirements of Federal, State, and local users, we will continue to identify, develop, and integrate the most cost-effective and appropriate solutions for public alert and warning. Moreover, by leveraging public–private partnerships with industry service providers, we will be better positioned to reach more of the public, more of the time, with the right information that can save lives and property. Using a DEAS with the nation's public television stations is one example of how we can benefit from such partnerships.

Appendix B


APTS National Capital Region Pilot Project for a Digitally Based Alert & Warning System
Test Messages
- Text
- Audio
- Video
Television & Radio Stations
Cable Service providers
Satellite Radio
WETA
WASHINGTON DC
Wireless Carriers
WETA - DT
DHS, FCC and NOAA
Maryland Public Television
NJN
KAKM
WHRO
Other Public Television Stations

Appendix C

DEAS National Pilot Participants

Federal Agencies:
- FEMA
- FCC
- NOAA

Broadcast Media:
- PBS (satellite backbone)
- WETA (NCR PTV)
- WMPT (Maryland PTV)
- NJN (New Jersey PTV)
- WHRO (Norfolk, VA PTV)
- KAKM TV (Anchorage, AK PTV)
- WRC TV (NBC 4)
- WTOP AM
- WETA FM (Public Radio)
- The Weather Channel

Wireless Services:
- Cingular
- T-Mobile
- Sprint
- Nextel
- USA Mobility
- Verizon
- CTIA (*observer*)

Other Media:
- XM Satellite Radio
- Comcast (cable MSO)
- NCTA (*observer*)

Phase II Expanded Sites (Public Television)

- Alabama Public Television
- Detroit Public Television
- KCTS – Seattle, WA
- KLVX – Las Vegas, NV
- KUED – Salt Lake City, UT
- KWBU – Waco, TX
- Mississippi Public Broadcasting
- New Hampshire Public Broadcasting
- Oregon Public Broadcasting
- KET, The Kentucky Network
- WBCC – Cocoa Beach, FL
- Wisconsin Public Television
- WITF – Harrisburg, PA
- WKNO – Memphis, TN
- WNET/WLIW – New York, NY
- WNPT – Nashville, TN
- WTVP – Peoria, IL
- Houston Public Television
- Iowa Public Television

MR. UPTON. Thank you. Mr. Guttman-McCabe.

MR. GUTTMAN-MCCABE. Thank you, Mr. Chairman. Good morning, Chairman Upton, and distinguished members of the subcommittee. I am Christopher Guttman-McCabe, Vice President for Regulatory Affairs at CTIA, the Wireless Association. I am privileged to appear before you today to endorse the WARN Act, to highlight the wireless industry's efforts regarding creation of an all hazards network and to discuss what role government can play in that effort. I want to thank Chairman Upton, the subcommittee, Representative Shimkus, Representative Wynn, and the other sponsors of the bill for their strong leadership and for focusing attention on the important and timely issue of emergency warnings and alerts.

The wireless industry recognizes the importance of this effort. CTIA and the industry have coordinated our efforts with the Department of Homeland Security, FEMA, and the FCC. The industry also launched a voluntary wireless Amber Alert service that not only will help protect our Nation's children, but also will provide a useful template as the industry moves forward with an Emergency Alert Service. The industry, like many other high-tech industries, is in a process of continual change and renewal. The wireless industry has invested billions of dollars in their networks. Additionally, consumers have also invested billions in handsets, PDAs, and data cards.

Going forward, new technologies and services are likely to extend both the reach and the capacity of wireless services. A sensible emergency alert and policy must take into account both the massive investment in place today, an investment that will define the capabilities that can be used in the short run, and the technological developments that propel the industry in the long run. We believe the WARN Act is designed to do just that, collaboratively considering government's needs as well as industry's existing capabilities and planned investments and evolution.

CTIA, working with the industry, has initiated a two-part approach toward development of an emergency alert solution. CTIA and the industry are working within existing capabilities to establish and initiate a voluntary effort to deliver presidential level emergency alert messages that would be sent via short message service to those subscribers that opt in to a participating carrier. This is based on the industry's current point to point configuration, which differs from broadcasters' point to multi-point platforms.

As discussed today, CTIA and the industry partnered with FEMA and APTS on a pilot project that utilized public television's digital spectrum to deliver alerts to wireless phones utilizing SMS. While there are both limitations on the number of SMS messages that can be sent during any one period of time, as well as limitations on the number of

characters that can be contained in any single message, there is one significant benefit to the short-term use of SMS: SMS exists today.

However, this initial service must be approached with caution as the limitations and concerns regarding both capacity and message content are likely to arise during an emergency. Second, as part of a longer term effort going forward, CTIA and the industry are investigating mechanisms for geographic delivery of messages. This second stage effort is designed to take advantage of the constant evolution that is a hallmark of our industry. Several of the capabilities being investigated for a geographic-based service would require the industry to address issues including standardization, product development and deployment, and likely handset turnover if the service is not available in existing handsets. The WARN Act provides a very sensible process that will help to integrate capabilities and evolution of the industry into the Emergency Alert Service.

The Act establishes an expert working group of government officials and industry experts that will work toward a service description and develop standards. This group logically will take into consideration industry capabilities and evolution. CTIA and the industry believe that any emergency alert service should utilize the full range of communications devices, such as wireline and wireless phones, e-mail and instant messaging systems, radios and television sets, each of which delivers a capability unique to that service, mobility for wireless and satellite devices, video for broadcasters, voice for radio broadcasters, and more.

The efforts discussed above are only a part of the work being done in this area. More work needs to be completed and ultimately government can help. A true government-industry partnership as envisioned in the WARN Act, as envisioned in the President's recent executive order, and as occurred during the development of the Wireless Priority Service, will benefit the emergency alert service. The WARN Act mirrors the Wireless Priority Service model and that is why I am encouraged about its adoption. It provides a process for collaboration, allowing the service to be defined before requirements are set, as well as funding for development and deployment.

Additionally, it would be important to consider liability protection as part of the Act. Ultimately, the WARN Act will provide a framework that will facilitate development and deployment of a nationwide Emergency Alert Service. CTIA and the industry look forward to continuing the partnership with government toward development of a robust Emergency Alert Service. Thank you again, Mr. Chairman, and the committee for this opportunity to voice our support for the WARN Act. We look forward to working with you and your staff toward a

service that will benefit the American people, and I welcome your questions.

[The prepared statement of Christopher Guttman-McCabe follows:]

PREPARED STATEMENT OF CHRISTOPHER GUTTMAN-MCCABE, VICE PRESIDENT, REGULATORY AFFAIRS, CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION

The wireless industry, like many other high-tech industries, is in a process of continual change and renewal. New technologies and services are likely to extend both the reach and capacity of wireless communications. A sensible emergency alerting policy must take into account both the massive investment in place today -- investment that defines the capabilities in the short run -- and the technological developments that propel the industry in the long run. The Warning, Alert, and Response Network Act ("WARN Act") reflects this careful, balanced approach and complements the wireless industry's concerted efforts to develop and deploy an effective Emergency Alert service.

CTIA, working with the industry, has initiated a two-part approach toward development of an Emergency Alert capability. In the short-term, the wireless industry proposes to deliver a SMS-based, or text messaging, solution. Along these lines, the industry is participating in a FEMA pilot project utilizing existing SMS capabilities. While limitations exist on the number and size of SMS messages, a significant benefit to the short-term use of SMS is that it is available today. However, this initial SMS-based service should be implemented with a clear understanding of its limitations.

Second, as part of the longer-term effort, CTIA and the industry are investigating mechanisms for geographic delivery of messages. The capability to deliver messages geographically currently does not exist in wireless networks in the United States. The industry is looking into what role capabilities such as cell broadcast, the existing NOAA service, or even geographic SMS could play in Emergency Alerts.

These longer-term solutions likely would require the industry to address issues including standardization, product development and deployment, as well as the need for handset turnover. CTIA continues to work with FEMA on the creation of a framework for development of an Emergency Alert service that utilizes the full range of communications devices.

The WARN Act will advance the efforts that have occurred to date and speed delivery of an effective Emergency Alert capability. The WARN Act's national network for the transmission of alerts aims to take advantage of wireless, Internet and other advanced technologies, while remaining technology-neutral. It enables appropriate federal, state or local government agencies to alert the public of disasters and threats, and reflects the same highly-successful process used to create the Wireless Priority Service, whereby government worked closely with the industry to establish a service description.

CTIA and the wireless industry also support the WARN Act's contemplation of a true government/industry partnership that investigates the following areas:

- Liability protection.
- Creation of a joint government/industry partnership to develop the requirements of an emergency alert service, with the goal of establishing standards.
- Appointment of a specific authority responsible for balancing local, state and federal requirements against industry capabilities.
- Designation of an entity tasked with operation of the Emergency Alert service and creation of a clear set of rules governing who may generate messages coupled with a process to authenticate and secure any Emergency Alert messages.
- Funding for research, development, and deployment of a nationwide alert service.

Good morning Chairman Upton, Ranking Member Markey, and distinguished members of the Subcommittee. I am Christopher Guttman-McCabe, Vice President for Regulatory Affairs at CTIA, The Wireless Association®. CTIA is the international organization that represents all sectors of the wireless communications industry: wireless carriers, manufacturers, and data companies. I am privileged to appear before you today to endorse the Warning, Alert, and Response Network Act ("WARN Act") (H.R. 5556), to highlight the wireless industry's efforts regarding creation of an all hazards network and to discuss what role Government can play in that effort. I want to thank Chairman Upton, the House Subcommittee on Telecommunications and the Internet, Representative Shimkus, and the other sponsors of the Bill for their strong leadership and for focusing attention on the important and timely issue of emergency warnings and alerts.

The wireless industry recognizes the importance of this effort. CTIA and the industry have dedicated resources to examine this issue and are working towards an emergency alert capability. CTIA and the industry have coordinated their efforts with the Department of Homeland Security and the Federal Emergency Management Agency ("FEMA"), as well as with the Federal Communications Commission ("FCC" or "Commission"). As discussed below, the industry also launched a voluntary Wireless AMBER Alert Service that not only will help to protect our Nation's children, but also will provide a useful template as the industry moves forward with an Emergency Alert service. While the AMBER alert service differs from an Emergency Alert service in that the AMBER Alerts are not necessarily initiated during a time of severe network congestions (as is likely the case in the context of an Emergency Alert), the industry already has begun to learn from the provision of this service.

Background

The industry, like many other high-tech industries, is in a process of continual change and renewal. The wireless industry has invested billions of dollars in their networks. Additionally, consumers also have invested billions in handsets, wireless PDAs, and data cards. The industry runs on a mix of technologies varying from first generation analog to the latest third-generation designs. Manufacturers and service providers unveil new capabilities every few days. New technologies and services are likely to extend both the reach and capacity of wireless services. Unfortunately, we do not know today what all those new capabilities will be or when they will become available. A sensible emergency alerting policy must take into account both the massive investment in place today -- an investment that defines the capabilities that can be used in the short run -- and the technological developments that propel the industry in the long run. We believe the WARN Act is designed to do just that - - take into consideration the industry's existing and planned investments.

Developing a national emergency alerting policy should not be a one-time event. Going forward, there should be a continuing process for identifying the emergency alert environment and merging it with industry capabilities. Uses and expectations of the service will indicate what may be appropriate for capacity of message delivery in the short term and long term. Further, the scope of who uses the system and for what purpose is very important to understand as it relates to the cost to develop, the management of the service, and effectiveness of the system.

CTIA, working with the industry, has initiated a two-part approach toward development of an Emergency Alert capability. The goal is to balance the industry's existing capabilities with the perceived requirements of an Emergency Alert service, at the same time recognizing that the industry is evolving. The continued evolution of the industry likely will result in different options being considered for delivery of Emergency Alert messages. For example, currently there is nothing initiated in the network for delivering messages to a specific targeted geographic area. Handsets and/or networks

would have to be upgraded or replaced in order to provide such a service, and development and deployment of any geographic service would take time.

Accordingly, CTIA and the industry are initially working within existing capabilities to establish and initiate a voluntary effort to deliver Presidential-level Emergency Alert messages via Short Message Service ("SMS"), or text message, to those subscribers that opt in to a participating carrier. As discussed below, CTIA and the wireless industry have partnered with FEMA on a pilot project that initially will utilize the industry's existing SMS, or text message, capabilities. The SMS capability exists in the majority of handsets, and is provided by the overwhelming majority of carriers.

While there are both limitations on the number of SMS messages that can be sent during any one period of time, as well as limitations on the number of characters that can be contained in any single message, there is one significant benefit to the short-term use of SMS – it is available today. Utilizing SMS initially will work to avoid a significant amount of the development timeframe that will accompany the solutions discussed below. However, this initial service must be approached with caution, as the limitations and concerns regarding both capacity and message content are likely to arise during an emergency.

Unlike the existing Emergency Alert network, which operates on broadcast networks designed to transmit messages from one point to multiple points, the existing wireless network was designed to be point to point – one customer to another customer, where the network has to route calls and text messages using switches and databases to direct traffic to individual users. In this environment, utilization of SMS to retransmit messages likely will result in latency of delivery of the message to some consumers. However, as was concluded in the Wireless AMBER Alert context, an SMS offering – despite its expected limitations – is the best existing, short-term option for delivery of alert messages.

Second, as part of the longer term effort going forward, CTIA and the industry are investigating mechanisms for geographic delivery of messages. This second stage effort is designed to take advantage of the constant evolution that is the hallmark of the wireless industry. The goal is to address the capacity issues that are part of any SMS-based alert service, as well as to develop a capability for targeting messages geographically.

The industry is looking into what role, if any, services such as cell broadcast and other broadcast technologies could ultimately play in the Emergency Alert environment. Recent developments, including but not limited to broadcast offerings on wireless phones, as well as services such as Qualcomm's proposed MediaFlo offering, highlight how the industry and its technology are in transition.

Several of the capabilities being investigated for a geographic-based service would require the industry to address issues including standardization (both of the underlying product as well as the alert development and delivery process), product development and deployment, as well as the need for handset turnover if the service is not available in existing handsets. The WARN Act provides a very sensible process that will help facilitate that evolution. The Act establishes an expert working group of government officials and industry experts that will work to set a service description and develop standards. This group logically will take into consideration industry capabilities and evolution, and will lead to a more robust service.

In the interim, CTIA continues to work with FEMA and the Federal Communications Commission on the creation of a framework for development of an alert service that ultimately can be transmitted on multiple retransmission media, including wireless. CTIA and the industry believe, that while wireless can be a component of any alerting service, any Emergency Alert service should not focus solely on the wireless network. Rather, an Emergency Alert service should utilize the full range of communications devices, such as wireline and wireless telephones, email and instant messaging systems, radios and television sets, each of which delivers a capability unique

to the service - - mobility for wireless and satellite devices, video for broadcasters, voice for radio broadcasters, etc..

FEMA Capitol Region Pilot Project

CTIA has been working diligently with carriers, manufacturers, and FEMA on a digital Emergency Alert pilot project in the national capitol region. As discussed this morning, the pilot project, being directed by FEMA, coordinated with the Association of Public Television Stations ("APTS"), and utilizing the digital broadcast spectrum, is designed to provide the Nation with an enhanced alert system. The goal of the first phase of the project was a "proof of concept" that Emergency Alert messages can be sent from FEMA to public broadcasters, embedded in the digital broadcast spectrum, and then re-transmitted to third parties, including wireless carriers. A portion of the embedded Emergency Alert message contained a text file that the wireless carriers were able to extract. Phase 1 of the pilot project has successfully been completed.

AMBER Alerts

The industry already is pursuing use of the wireless phone for the safety of the country. On its own initiative, the industry has launched a Wireless AMBER Alert Service that will provide another level of safety to its customers and the American public. This service enhances the industry's vast array of socially responsible initiatives. Partnering with the National Center for Missing & Exploited Children ("NCMEC") as well as the Department of Justice (the designated national AMBER Alert coordinator), the wireless industry is making potentially life-saving AMBER Alert text messages available to wireless subscribers who "opt in" to the offering. The carriers currently participating collectively provide service to more than 90% of U.S. wireless customers. The service has been designed to be scaleable so that additional carriers can continue to join the effort going forward.

Wireless AMBER Alerts will significantly increase the reach of the AMBER Alert notification program. The Ad Council recently has chosen the Wireless AMBER Alert program for its support. Past experiences indicate the first three hours are critical to the successful recovery of an abducted child, and the Wireless AMBER Alerts will be an invaluable tool in assisting the search process. According to the NCMEC, Wireless AMBER Alerts will potentially serve as a preventive tool as well. People who prey on innocent children will perhaps think twice before carrying out their malicious acts, knowing that almost any cell phone owner they pass could identify a perpetrator and have access to the immediate means to guide law enforcement officials to their location.

Under the program, the subscribers of participating carriers may "opt-in" to receive Wireless AMBER Alerts, and may do so at www.wirelessAMBERalerts.org, or by visiting their wireless service provider's web site.

Going Forward

The efforts discussed above are only a part of the work being done in this area. More work needs to be completed, and, ultimately, government can help. A true government/industry partnership as envisioned in the WARN Act, will facilitate development and deployment of the service. The wireless industry has in its immediate past an example of what can happen when government and industry partner voluntarily on the creation of a new service -- Wireless Priority Service. Wireless Priority Service is a White House-directed National Security/Emergency Preparedness program, through the National Communications System, that utilizes the commercial wireless networks to deliver priority access to key government officials during times of crisis and high call volume. Government, through both the National Communications System and the Federal Communications Commission, worked with industry on development of the requirements for the service, but did not mandate a solution. Instead, government has

provided funding to manufacturers and vendors for development of the capability, resulting in rapid deployment of the service in two phases. The WARN Act mirrors the Wireless Priority Service model – and that is why I am encouraged about its adoption. WARN will provide a framework that will facilitate development and deployment a nationwide Emergency Alert Service.

CTIA and the wireless industry believe that it is counter-productive to have a statutory mandate in this environment. Application of the Wireless Priority Service model of government/industry partnership will lead to a solution that takes advantage of the industry's creativity and ingenuity. As government and industry move forward with both a short-term and possibly longer-term solution, the following are some of the issues that would benefit from joint government/industry consideration:

- Liability relief. As with the Broadcasters that currently provide the Emergency Alert service, the industry requires full liability protection for delivery of any Emergency Alert message, both for any short-term solution and any longer-term solution.
- Service Description. As considered in the WARN Act, a joint government/industry partnership to develop the requirements of any emergency alert service that ultimately would result in the development and adoption of standards. This partnership will allow manufacturers to build to specific requirements.
- Designation of Authority for Development of an Emergency Alert Service. As in the WARN Act, designation of a specific authority responsible for balancing local, state and federal requirements against industry capabilities.
- Designation of Authority for Operation of an Emergency Alert Service. Again, as considered in the WARN Act, designation of a specific authority tasked with operation of the Emergency Alert service as well as creation of a clear set of rules governing who is permitted to generate messages and under what circumstances they can be generated, coupled with a process to authenticate and secure any Emergency Alert messages. Due to the possibility of a hoax transmission, this process must guarantee the integrity of the messages from the point of origination to delivery.
- Research, Development, Deployment and Implementation Support. Finally, as considered in the WARN Act, the provision of funding to support research and development, as well as deployment and implementation, will benefit the establishment of a nationwide alert service.

Conclusion

CTIA and the wireless industry look forward to continuing the partnership with government toward development of an Emergency Alert Service. Thank you again for this opportunity to voice our support for the WARN ACT, to highlight the wireless industry's efforts to contribute to an all hazards network, and to discuss what role the Government should play in that effort. We look forward to working with you and your staff toward a service that will benefit the American people.

MR. UPTON. Mr. Kelly.

MR. KELLY. Chairman Upton, and members of the subcommittee, good morning, and thank you for inviting me to testify on emergency communications and the WARN Act. My name is Vincent Kelly, and I am the President and Chief Executive Officer of USA Mobility, the Nation's largest provider of paging services. I have been with the company and its predecessor, Metrocall, for over 19 years. USA

Mobility strongly supports the WARN Act and applauds the subcommittee's efforts to promote public safety through the broader dissemination of critical and often life-saving emergency information.

Paging services are ideally suited to this task. Our network is robust, reliable, and redundant, and our services are affordable. For those reasons, paging is often the technology of choice for emergency responders, healthcare professionals, and others who need messaging capabilities that will remain operational during a crisis. When voice networks were out of service or overloaded during times of national emergency, such as on September 11 or during Hurricane Katrina, our network performed extremely well and allowed first responders to get critical messages to each other. We are proud that the FCC's independent panel reviewing the impact of Hurricane Katrina recently issued a report praising the exemplary performance of paging services during the storm and recommending that emergency responders throughout the Nation rely on paging services on a primary basis or as a backup to mobile phones and other broadband devices.

Just as importantly, our paging network is equipped to broadcast thousands or even millions of alert messages simultaneously to the public, a capability not matched currently by mobile phone providers. My written testimony describes in detail how our network operates and why it offers superior reliability for emergency communications, but let me take a moment to highlight some of the key attributes.

First, our network is extremely reliable because we do not use the public switched telephone network to back all our traffic from our transmitters to our switches. Instead we rely on satellites which means hurricanes and other calamities that damage trunk lines and telephone switches do not interrupt our service. Second, we simulcast signals to our subscribers from multiple towers, and our transmitters are generally located higher off the ground and emit higher powered signals than mobile voice providers. For those reasons, our signals can travel further and penetrate buildings better than mobile voice services. And if one tower goes down our simulcast technology often allows users to receive messages from another tower in the area.

Third, paging devices themselves are reliable and very easy to use. Unlike cell phones and PDAs, a pager typically runs for weeks on a single AA or AAA battery. Battery-powered pagers are not affected by a loss of electrical power because there is no need to recharge them. These attributes make paging devices ideal for messaging among first responders and also make our network perfect for use in our national alert system. Our company is committed to transmitting alerts to our subscribers in an emergency. In addition, because mobile voice networks currently are not set up to broadcast alerts and our network is,

our broadcast capabilities must best be utilized in emergencies if mobile telephone carriers were to integrate our paging technology into mobile phones.

This approach could offer the fastest and most promising way to roll out a national alert capability to mobile voice subscribers or either to work with the voice carriers and manufacturers to make this concept a reality in the near future. In closing, I would like to underscore our support for the proposed legislation and highlight three issues that are particularly important. First, we strongly support the working group approach taken by the bill. The best way to establish systems and protocols capable of delivering messages to a wide array of technology platforms is to convene a working group as proposed in the WARN Act. USA Mobility is prepared to play a significant role in the working group.

Second, the legislation is necessary to provide funding for this initiative. The national rollout of an expanded multi-platform alert system will require funding in addition to that proposed by the WARN Act. USA Mobility urges Congress to provide additional funding to the Department of Homeland Security to authorize grants to State and local emergency responders for the acquisition, use, and improvement of reliable communication systems including paging services.

Finally, USA Mobility believes that any legislation must provide liability protection for communication service providers who participate in the national alert system. The threat of baseless lawsuits would have a chilling effect on participation by service providers, which would limit the success of the initiative. In conclusion, USA Mobility commends the subcommittee and Representatives Shimkus and Wynn and other sponsors of the WARN Act for their attention to this critical issue and looks forward to assisting in the development of a robust national alert system.

[The prepared statement of Vincent D. Kelly follows:]

PREPARED STATEMENT OF VINCENT D. KELLY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, USA MOBILITY, INC.

Summary of Written Statement of Vincent D. Kelly

As the nation's leading provider of paging services, USA Mobility is eager to play an integral role in the national alert system contemplated by the WARN Act. USA Mobility's paging services already provide a highly reliable, redundant, and affordable text-messaging solution to mission-critical emergency responders. We also have the capability *today* to broadcast emergency alerts to all of our text-messaging subscribers, using satellite-controlled transmitters. Moreover, our nationwide network can support alerting capabilities for other service providers, such as wireless voice carriers that cannot provide similar point-to-multipoint messaging.

USA Mobility's paging network has several key attributes that are ideally suited to emergency communications. Our network relies on satellites rather than the PSTN to link transmitters and switches, and therefore can maintain operations when telephone

trunk lines and switches are out of service. In addition, our paging transmitters emit extremely powerful signals in a "simulcast" fashion, maximizing the network's geographic reach and in-building penetration. Paging devices typically run on a single AA or AAA battery and have a long battery life; unlike cell phones and PDAs, these devices are not affected by a loss of electrical power because there is no need to recharge them. While damage to a transmission tower usually will disrupt mobile telephone service, paging's use of simulcasting enables the delivery of messages to paging devices from other nearby towers. Paging also is a very affordable technology, which makes it suitable either as a primary communications tool or as a backup.

These strengths were clearly demonstrated during recent crises, including Hurricane Katrina and September 11. For example, the FCC's Independent Panel on the Impact of Hurricane Katrina on Communications Networks praised the exemplary performance of paging services during the storm and even called on federal officials to promote the use of pagers by emergency responders nationwide. During 9/11, the paging network remained operational when wireline and mobile voice networks became overloaded and could not complete calls.

USA Mobility seeks to leverage these strengths as a participant in the expanded national alert system. Our network will continue to serve as a critical tool for first responders, and we are ready, willing, and able to provide emergency alerts to all of our text-messaging subscribers. In addition, our network's broadcast capabilities might be best utilized in emergencies if the national mobile telephone carriers were to integrate our paging technology into their handsets. This approach seems to offer the fastest and most promising way to roll out a national alert capability to mobile phone subscribers, because mobile voice networks are not set up to broadcast alerts.

USA Mobility applauds the Subcommittee for its work on the national alert system, and in particular we endorse the working group approach taken by the WARN Act. Industry stakeholders and officials at all levels of government should collaborate on the development of technical interfaces, security procedures, and related matters. We also believe that the legislation's funding provisions are necessary to the deployment of a robust multi-platform system, and Congress should expand its funding of grants to emergency responders. Finally, any legislation should include liability protection for participating service providers.

Chairman Upton and members of the Subcommittee, thank you for inviting me to testify on emergency communications and the Warning, Alert, and Response Network Act ("WARN Act"). My name is Vincent Kelly, and I am the President and Chief Executive Officer of USA Mobility, the nation's largest provider of paging services.

USA Mobility strongly supports the WARN Act and applauds the Subcommittee's efforts to promote public safety through the broader dissemination of critical, and often life-saving, emergency information. Paging services are ideally suited to this task. Perhaps the most important feature of our network *today* is the ability to broadcast messages to millions of Americans simultaneously utilizing a "group call" feature with our simulcast technology on a geographic zone-by-zone basis. While my company serves several million customers and is capable of transmitting alerts to our messaging subscribers in an emergency, our network's broadcast capabilities might be best utilized in emergencies if other service providers—such as the national mobile telephone carriers—were to integrate our paging technology into mobile phones and similar devices, allowing information to be transmitted across multiple platforms simultaneously.

Our paging network also is extremely reliable, inherently redundant through simulcast technology, and very affordable. For these reasons, paging has proven particularly vital to mission-critical personnel such as first responders, doctors and nurses, and government officials. In fact, the FCC's Independent Panel Reviewing the

Impact of Hurricane Katrina on Communications Networks recently recognized the exemplary performance of paging networks during Hurricane Katrina and recommended that paging carriers play an important role in any expanded alert system.

My testimony today will describe the unique strengths of paging technology, its proven record in emergency situations, and the role we are prepared to play in an expanded national alert system. Before addressing these issues, I will begin with some brief background information on USA Mobility.

Company Background

USA Mobility was formed in late 2004 by the merger of Arch Wireless, Inc. and Metrocall Holdings, Inc., then the nation's two largest independent paging and wireless messaging companies. I have been with the company and with its predecessor Metrocall for 19 years, and I understand well the communications issues that arise during times of emergency.

USA Mobility provides one-way and advanced two-way text-messaging services, as well as traditional numeric paging services. As of March 31, 2006, USA Mobility provided service to over 4.6 million messaging devices, out of a total of more than 8 million units industry-wide. While the mass market for paging services has declined in recent years as consumers have increasingly relied on mobile phones, our paging services continue to play a critical role for first responders, including police officers, fire fighters, and rescue workers. In addition, hospitals and health clinics, as well as government agencies, rely heavily on paging services. We also serve more than 80 percent of Fortune 1000 companies**.** Our paging networks, which include approximately 15,000 transmitters, reach more than 90 percent of the U.S. population with one-way service and over 80 percent with two-way service, encompassing the largest 100 markets.

Key Attributes of Paging Networks

USA Mobility's paging network is ideally suited to emergency communications based on several key attributes, including *reliability*, *redundancy*, and *affordability*. These attributes will strongly further the WARN Act's goals by ensuring the availability of a text-messaging capability as a primary or back-up system for public alerts and facilitating communications among first responders in emergency situations.

Paging is one of the most reliable communications technologies on the market today. Our network architecture combines digital satellite transmission with an extensive system of terrestrial transmitters and paging switches. Because our narrowband PCS transmitters are controlled by satellites, our transmission network is far less dependent on the public switched telephone network than many other wireless systems—and thus far less vulnerable to outages during natural disasters and other emergencies. Satellite transmission also enables us to direct messages to multiple base-station paging transmitters within a geographic footprint in a "simulcast" fashion. Moreover, paging networks enjoy redundancy due to the benefits of this simulcast technology. Because paging messages are simulcast from multiple towers to each pager, damage to a single tower or even several towers does not necessarily interrupt the delivery of messages, as the pager might be able to receive signals from other towers in the area. Mobile voice networks typically lack this capability.

Another distinctive feature of paging networks is that our transmitter antennas are located on towers high off the ground (over 300 feet) and on the tops of buildings, and emit extremely powerful signals of up to 3,500 watts ERP. In contrast, most mobile phone transmitter antenna arrays typically are located 100 feet above the ground and emit significantly less powerful transmitter signals of 90 watts ERP. As a result of our unique simulcasting and high-power transmissions, paging signals can travel farther and penetrate buildings better than signals used by other wireless technologies. Additionally,

many mobile phone outages result from damage to their large antenna arrays, in contrast to the resilience of the smaller antennas utilized by paging systems.

Paging devices are also very reliable. Unlike cell phones and PDAs, pagers typically run on a single AA or AAA battery and have a long battery life relative to other wireless devices. These battery-powered pagers are not affected by a loss of electrical power because there is no need to recharge them.

Moreover, paging devices and service plans are affordable, particularly relative to other wireless services. A typical paging service plan includes the cost of the paging device and still costs less than $10 per month. This low cost continues to make pagers an attractive option for private employers and government agencies that need basic messaging capabilities, either for primary use or to back up their broadband services. The cost savings also benefit low-income consumers who cannot afford more expensive wireless communications services.

Performance During Hurricane Katrina and 9/11

The strengths of our technology were clearly apparent during Hurricane Katrina and 9/11. Hurricane Katrina disabled most communications networks in the Gulf Coast region, but paging services remained operational in many areas while other networks failed. USA Mobility's network was fully operational within two days in the areas hardest hit by the storm (most wireline and wireless providers required far longer to restore full service). Several of our customers reported that paging services provided their only link to the outside world, as they could not use wireline or wireless telephones. For example, as an employee at Women's Hospital and Tulane Lakeside Hospital reported:

> Pagers were used by Medical Staff for communicating with the doctors and nurses in transporting the Mom's and Babies from one facility to another. Text messaging was the only way to get critical messages out to the doctors and nurses since phone lines were all down or all circuits busy.

Similarly, Carter C. Blumeyer, a Communication Specialist with FEMA during Hurricane Katrina, reported his experience with paging and the Reflex technology protocol we deploy on our two-way network to an industry newsletter:

> I am with an Urban Search and Rescue for FEMA and with the cell and data service down and systems being flooded. . . . ReFLEX is working fine and communications are flowing through the units! We are allowing people to send e-mails to loved ones to let them know they are alive and well. Again the critical use of ReFLEX [has been available] in all the disaster situations I have been to (9/11 NYC, Ivan, Isabel and now Katrina!).

The recent report of the FCC's Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks validated this anecdotal evidence and commended the exemplary performance of paging services during the crisis. The Panel concluded that paging systems were more reliable than other networks because:

- "[P]aging systems utilize satellite networks, rather than terrestrial systems, for backbone infrastructure. Paging technology is also inherently redundant, which means that messages may still be relayed if a single transmitter or group of transmitters in a network fails." (Report at 10.)
- "Paging signals penetrate buildings very well, thus providing an added level of reliability." (*Id.*)
- "Additionally, pagers benefited from having a long battery life and thus remained operating longer during the power outages. Other positive observations concerning paging systems included that they were effective at text messaging and were equipped to provide broadcast messaging." (*Id.*)

- "[G]roup pages can be sent out during times of emergencies to thousands of pager units all at the same time." (*Id.*)

Because of the remarkable reliability of the paging network during Hurricane Katrina, the Panel repeatedly recommended that emergency responders rely on pagers as a primary or back-up communications system in future emergencies. The Panel stated, for example, that the FCC should "[u]rge public safety licensees to familiarize themselves with alternative communications technologies to provide communications when normal public safety networks are down. Such technologies include . . . two-way paging devices, and other technologies less reliant on the PSTN." (*Id.* at 37-38) The Panel also called on the FCC to support Department of Homeland Security efforts to make emergency medical providers eligible for funding for emergency communications equipment and to expand the Emergency Alert System, *see id.* at 40, as the WARN Act seeks to accomplish.

Paging also performed exceptionally well during the tragic events of September 11, 2001. While the wireline and related wireless networks were quickly inundated with high call volumes and thus inaccessible for most people, pagers continued to send and receive data throughout the duration of the emergency. The superior performance of paging systems during 9/11 led industry expert Dr. Peter Kapsales to state that two-way paging "should be considered a primary or backup system to improve real-time communication among emergency personnel during critical periods when voice communication is not practical or fails."

Paging Should Be a Central Component of the National Alert System

As this past performance demonstrates, USA Mobility and other paging carriers can leverage the benefits of their networks as participants in the expanded national alert system. There can be no legitimate debate about the value of enabling people to receive alerts over as many communication platforms as possible, as the WARN Act proposes. Nor is there any doubt that wireless technologies in particular should play a key role in the national system. Our society is going wireless. Although it is important to reach the television and radio audiences with emergency information, a growing number of citizens rely on wireless networks to receive information (and, of course, to communicate with others). As of 2005, there were more than 185 million mobile telephones, and more than 8 million paging devices, in service. Sending emergency information to wireless devices is especially important if people are on the move during an emergency, or if televisions and radios are inoperable based on power failures.

While mobile phone providers at this point serve vastly more consumers than paging carriers, the superior point-to-multipoint capabilities of paging networks make paging carriers critical participants in the national alert system. The FCC's rulemaking on expanding the Emergency Alert System has focused largely on mobile phone providers' current *inability* to broadcast alert messages to large numbers of consumers. Mobile phone carriers have proposed short-term solutions based on short-message-services, which are quite limited in terms of message length and the number of subscribers that can be reached promptly. Over the next several years, mobile phone carriers propose to develop more robust broadcast systems capable of transmitting messages to large numbers of subscribers simultaneously.

In contrast, as I have described, paging networks already have this capability *today*. Broadcasting large numbers of messages does not cause bottlenecks in paging networks because, unlike voice networks, they are designed for this function. We are able to put this capability to use in the national alert system, so that our text-messaging subscribers can receive alert messages from local, state, and national officials. Our systems can be configured to transmit messages to targeted simulcast areas, to specific customer groups (such as emergency responders), or even to our entire base of text-messaging subscribers.

While our services are extremely important to our subscribers—including first responders and health care professionals in particular—a greater public benefit might result if other service providers integrated our paging technology into their own devices to take advantage of our extraordinary alert capabilities. For example, wireless voice providers could direct manufacturers to install paging technology in mobile phones. This relatively low-cost solution would enable wireless carriers to transmit alert messages to a far broader audience as soon as new handsets are introduced into the marketplace. In addition, paging networks can readily support the transmission of alert messages to wall-mounted devices in consumers' homes, which could emit a tone or light up when an emergency message has been received. Such devices could even be detachable and portable so they would deliver the benefits of mobile devices during a crisis.

Specific Recommendations

USA Mobility believes that the WARN Act will strengthen emergency communications in a number of ways, and we commend the Subcommittee for convening a hearing. I want to highlight three aspects of the legislation that are particularly important and beneficial.

First, we strongly support the working group approach taken by the bill. As I have explained, USA Mobility's paging network is capable of broadcasting alert messages to a mass audience or to targeted areas and user groups. But the interface between our network and the officials responsible for issuing alerts has yet to be developed. In our view, the most efficient and effective way to establish systems and protocols capable of delivering messages to a wide array of technological platforms is to convene a working group as proposed in the WARN Act. The working group not only can develop appropriate transmission protocols but also can help establish appropriate authentication and validation systems to prevent misuse of the national alert system. As the nation's leading paging carrier, USA Mobility is prepared to play a significant role in the working group contemplated by the legislation.

Second, the legislation is necessary to provide funding for this initiative. To its credit, FEMA has undertaken an important pilot program, the National Capital Region Digital Emergency Alert System Pilot (DEAS-NCR), in which USA Mobility participated along with public broadcasters and other entities. But the national rollout of an expanded multi-platform alert system necessarily will require additional resources. In addition to the funding proposed by the WARN Act, USA Mobility urges Congress to provide additional funding to the Department of Homeland Security to authorize grants to emergency responders at the state and local levels for the acquisition, implementation, and improvement of reliable communications systems, including paging services.

Finally, USA Mobility believes that any legislation must provide liability protection for communications service providers who participate in the national alert system. The threat of baseless lawsuits would have a chilling effect on participation by service providers, and broad participation is essential to the success of the initiative.

In conclusion, USA Mobility commends the Subcommittee and the sponsors of the WARN Act for their attention to this critical issue and we look forward to assisting in the development of a robust national alert system.

MR. UPTON. Thank you. Mr. Pitts.

MR. PITTS. Good morning, Mr. Chairman, members of the subcommittee. My name is Billy Pitts, and I am President of Government Affairs for the NTI Group. I am not from Michigan but I do appreciate old cars. I appreciate also the opportunity to participate in this hearing on the WARN Act. I want to commend Representative Shimkus

and his fellow co-sponsors for recognizing the urgent need to reform the Nation's emergency communications capabilities. The WARN Act envisions the use of advanced technologies that will help ensure that the public receives fast, reliable information during crisis situations.

Earlier this year, I was privileged to serve as a member of the FCC's independent panel reviewing the impact of Hurricane Katrina on communication networks. The Katrina panel found that for a variety of reasons the existing EAS system was not up to the task. The panel recommended that a comprehensive national warning system be established, focusing, in particular, on the use of advanced technologies that can target alerts to particular areas and at risk populations. I am pleased that the WARN Act shares these same goals.

The reason I was appointed to the Katrina panel is that my company is a leader in the development of an advanced Time Sensitive Notification, TSN, technology that enables schools or community leaders to deliver critical information to targeted groups of citizens within a narrow timeframe. This technology was dramatically demonstrated during last year's hurricanes. The gentleman from Nebraska mentioned we are one of those boots on the ground companies. We are doing over 12 million calls a month currently. I expect to more than double that at the end of the year. We do the multi-lingual target alerts the gentleman alluded to.

TSN technology combines advanced computing with the near ubiquity of phone service to allow officials to record a voice message and have it delivered to thousands of people in minutes via cell phones, landlines, and a variety of other devices. TSN systems represent a quantum leap forward from earlier auto dialer systems that lack the speed, capacity, flexibility, and intelligence to reliably provide emergency information to the public. An advanced TSN system is capable of delivering a 30-second message to over 400,000 recipients in less than an hour. In contrast, a standard auto dialer would take over a day.

The way that our system works is elegantly simple. An authorized user with access to either a landline or cell phone interfaces with the password protected system via a toll free number and records an outgoing voice message. The user then can program this message either via a secure Internet connection or over the phone to be sent immediately or at a specified time to either an entire universe of recipients or to selected subgroups. Such advanced systems offer a geographic mapping function that gives users the ability to send messages to all residences or businesses in a particular area. Using this feature a community could, for example, notify all residents within five blocks of an evacuation order.

A school system could alert a group of parents waiting at a single bus stop that their children's transportation has been delayed or re-routed.

One of the best things about this technology is that it does not require the installation of new equipment or have a steep learning curve. Another benefit derives from built-in redundancies that provide government officials with increased assurance that their emergency messages will reach their intended recipients even in the face of power outages or flood. Advanced TSN systems have interactive functionality. They not only deliver messages but they allow recipients to communicate back to the sender. For example, the sending party can inquire whether a recipient is in need of assistance and the recipient using the phone's touch-tone capability can send an appropriate response greatly facilitating relief efforts.

The WARN Act is of crucial importance because it seeks to rectify the current limitations of emergency notification systems now in place. As the provider of one such advanced system, we heartily endorse the WARN Act and look forward to working with members of the subcommittee as this important legislation moves forward. I would like to tell the gentleman from Maryland that we have several Maryland schools as well as the D.C. public school system that we are working with, and we would enjoy working with you and your staff. I would be pleased to answer any questions.

[The prepared statement of Billy Pitts follows:]

PREPARED STATEMENT OF BILLY PITTS, PRESIDENT, GOVERNMENT AFFAIRS, THE NTI GROUP, INC.

The co-sponsors of the WARN Act are to be commended for recognizing the urgent need for Congress to incorporate advanced technologies into the nation's emergency communications capabilities in order to ensure that the public receives fast, reliable information during crisis situations.

The FCC's Katrina Panel found that "the use of communications networks to disseminate reliable emergency information to the public is critical – before, during and after such events." The Panel also found that, for a variety of reasons, the current EAS system was not up to the task and recommended that a comprehensive warning system be established "to increase the penetration of warnings to the public," focusing on the use of advanced technologies that can target alerts to particular geographic areas and at-risk populations.

Time-sensitive notification ("TSN") systems, such as those deployed by The NTI Group, Inc. ("NTI"), combine advanced computing with the near ubiquity of phone service to allow officials to record voice messages and have them delivered to targeted recipients in a matter of minutes. TSN technology, which is available and in use today, fulfills many of the recommendations of the Katrina Panel and supports the specific goals that the WARN Act identifies as integral to a new National Alert System, as follows:

TSN technology can be used to provide messages to an entire community or to very small subgroups (**WARN Act goals: provide alerts to the "largest portion of the affected population feasible" and "permit narrowly targeted alerts"**);

TSN systems are designed with built-in redundancies to ensure functionality in the event of power failures and, as "hosted" services, do not require the installation of new equipment or require users to learn to use a new technology (**WARN Act goals: "system redundancies," "widely dispersed access points," and no need for activation of "a particular device"**).

TSN technology allows the government to communicate with the public through a "credible spokesperson," such as a mayor, fire chief, or school superintendent, thereby ameliorating the confusion that is often created by the distribution of overbroad or inconsistent information by systems that depend on the mass media **(WARN Act goal: "shall transmit addresses by Federal, state, tribal or local officials when necessary")**. Another major benefit of TSN technology is that it has interactive capabilities that permit recipients to communicate back to the sender.

While TSN technology is widely used for emergency and non-emergency communications, particularly communications by and among educators, students and parents, its adaptability for use on a broader scale for public alerts has been firmly established. The FCC has been urged to foster the deployment of TSN technology by designating TSN services as "eligible" for E-Rate support and by promoting pilot projects that would allow more immediate evaluation and use of advanced notification technologies such as TSN systems. We urge Congress to support these efforts.

Introduction

Good morning, Mr. Chairman and members of the Subcommittee. My name is Billy Pitts and I am President, Government Affairs for The NTI Group, Inc. ("NTI"). I appreciate the opportunity to participate in this hearing on the WARN Act and want to commend Representative Shimkus and his fellow co-sponsors for recognizing that there is a pressing need to incorporate advanced technologies into the nation's emergency communications capabilities so officials at the national, state, and local levels are able to provide members of the public with warnings and crisis-related information in the most efficient and effective manner possible.

Earlier this year, I was privileged to serve as a member of the FCC's Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks. One of that panel's key findings was that "the use of communications networks to disseminate reliable emergency information to the public is critical – before, during, and after such events." The Katrina panel also found that, for a variety of reasons, the existing EAS system was not up to the task with respect to Hurricane Katrina. As a result, the panel made several recommendations aimed at improving the nation's emergency communications system, including the following:

- Pursue the establishment of a comprehensive national warning system that complements existing systems and allows local officials to increase the penetration of warnings and to target alerts to particular areas.
- Commence efforts to ensure that persons with disabilities and non-English speaking Americans receive meaningful emergency information.
- Improve coordination of public information functions in order to facilitate the delivery to the public of consistent and reliable emergency information.

Time Sensitive Notification Technology

The reason I was appointed to the Katrina Panel, and the contribution I believe I can make to the Committee's consideration of the WARN Act, arises from the fact that my company, NTI, is a leader in the development of an advanced "time sensitive notification" (or "TSN") technology that enables community leaders to deliver detailed emergency information to targeted groups of citizens, both small and large, within a narrow timeframe. This TSN technology offers a proven method of augmenting existing

modes of emergency communications that fulfills many of the Katrina Panel's recommendations and directly supports the functions of a National Alert System outlined in the WARN Act.

Generally described, TSN technology combines advanced computing with the near ubiquity of phone service to allow officials to record a voice message and have it delivered to thousands of people in minutes via cell phones and landlines.[1] TSN technology also is capable of delivering messages to personal communications devices, such as a Blackberry, PDA, or a standard e-mail account. TSN systems can be used to convey vital information before, during or after crises – in instances involving, for example, an amber alert, storm warning, chemical spill, terror attack, or pandemic. Best of all, TSN technology can be put to immediate use by governmental entities without the need for officials to install or learn how to operate any new equipment.

To explain a bit more fully, TSN systems are advanced "one-to-many" telephonic systems that represent a quantum leap forward from earlier auto-dialer systems. In contrast to auto-dialers, which lack the speed, capacity, flexibility and "intelligence" necessary to serve as a reliable provider of emergency information to the public, TSN systems utilize a hosted "Application Service Provider" model that makes them a far more robust and user-friendly tool for communicating information in urgent situations. While a standard 48-port auto-dialer system takes over eight and a half hours to make a single attempt to send a 30-second message to 50,000 people, an advanced TSN system is capable of delivering messages (including making repeat calls where necessary) to tens of thousands of recipients in just a matter of minutes.[2]

To briefly summarize, TSN systems operate as follows: An authorized user with access to either a landline or cell phone interfaces with the password-protected system via a toll-free number and records an outgoing voice message. The user can then program this message (either via a secure Internet connection or over the phone) to be sent immediately, or at a specified time, to either an entire universe of recipients or to selected subgroups. Some TSN systems even offer a geographic mapping function that gives users the ability to send messages to all telephones in a particular area. Using this feature, a city could, for example, notify all persons on a particular block of an evacuation order or a school district could alert a group of parents waiting at a single bus stop that their children's transportation has been delayed or re-routed due to an accident or weather conditions.

Unlike predecessor notification systems, TSN systems typically are designed with multiple redundancies. For example, the TSN systems deployed by NTI not only have the ability to deliver messages through multiple mechanisms, they also have carrier redundancy, power redundancy, and database redundancy.

Carrier redundancy is achieved by locating TSN systems on several local exchange carriers' ("LECs") and interexchange carriers' networks, allowing the TSN system user to place thousands of calls without the call traffic congestion that would occur if all of the calls passed through a single LEC's central office. For instance, if a mayor chose to initiate calls from an auto-dialer located within his or her city, both the outgoing calls and the incoming calls would cause the LEC to experience congestion. By initiating calls from multiple sites located outside of the LEC's service area, a TSN service provider is able to eliminate one layer of congestion and reduce the risk of system failure. Enhanced TSN systems avoid overwhelming the local network operations center

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[1] The United States has a telephone penetration rate of 92.4 percent for landline phones and 62 percent for mobile phones. *See Federal State Board on Universal Service*, Order, 36 CR 1279, ¶ 8 (2005); *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Tenth Report, FCC 05-173, ¶ 5 (rel. Sept. 20, 2005).

[2] Typically, TSN providers will make three (3) to five (5) attempts before considering a notification process complete. Speed of delivery will vary based on congestion at the local network operations center.

("NOC") by using software that can read congestion at the local level and sort call traffic automatically. As a result, TSN systems are able to offer the quickest and highest percentage possible for call completion.

In order to obtain power and database redundancy, TSN providers deploy systems at sites straddling the nation's three power interconnects, ensuring constant access to power during emergencies; if one of the major power interconnects fails and all back-up resources have been expended, the TSN system provider can redirect calls to its operational centers located on the other two power interconnects to ensure that its users' messages are sent. Furthermore, if there is a power failure or other problem associated with a data center in a geographic area, the TSN technology can automatically extract information (*e.g.*, the phone numbers to which calls should be sent) from a redundant data center in another geographic area. Each data center also is supplied with its own back-up systems (gas generators, etc.) to allow the center to remain operational should it experience a power failure. Thus, users of TSN providers' systems maintain the ability to send messages even in circumstances where the user's primary site, or one of its other sites, may lack electrical power.

Multiple redundancies are only one of the features that distinguish advanced TSN systems from predecessor technologies. Other benefits offered by TSN technology in providing urgent communications include the following:

The architecture of intelligent TSN systems minimizes local phone line congestion. TSN systems have intelligent delivery capability, utilizing mathematical algorithms to analyze network congestion and to automatically adjust to the point-of-present capacity. Where call congestion is detected, TSN systems can throttle down how frequently calls are sent while simultaneously looking for less congested paths. Thus, for example, when NTI's advanced TSN technology detects a certain level of congestion, it can redirect calls to other central offices, so that a local telephone network is less likely to be "exhausted" by urgent calls.

Predecessor systems with unsophisticated delivery detection, on the other hand, are not aware of congestion. They are simply programmed to send one call per line upon the previous call's completion. If the system is large enough to get calls through quickly, meaning, if enough phone lines are employed to send calls at one time, then the system could potentially choke the local telephone network to the point of collapse. If the system is small enough to not cause this type of congestion, it is most likely not going to have enough capacity to get calls out to a large number of recipients quickly.

TSN systems send messages at faster speeds than their technological predecessors. Unlike predecessor notification systems, TSN systems are not limited to the number of telephone ports installed by the user. Rather, TSN systems are capable of originating thousands of calls over several different carriers' networks simultaneously, allowing users to deliver significantly more messages in substantially less time (and providing redundancy protection should one carrier experience its own congestion or failure) than older notification technologies. For example, NTI's advanced TSN system is currently delivering 400,000 thirty-second voice messages in a half-hour and has contracted Service Level Agreements ("SLAs") to ensure the capacity to deliver well over that amount. As discussed above, by employing software that can read congestion at the local carrier level, TSN providers are better able to ensure that more calls can get through the pipe at the local level quickly by minimizing network congestion (fast busy signals). This performance stands in stark contrast to predecessor systems' slower speeds, which are causing some municipalities to consider making equipment upgrades to increase their system speeds.[3]

TSN technology provides message consistency and facilitates the use of a "credible spokesperson." According to the FCC's Katrina Panel, one of the

[3] *See* "Five Towns Look to Speed Up Reverse 911 System," Ashbury Park Press (Oct. 20, 2005).

shortcomings in the dissemination of emergency information during last year's storms was the confusion engendered by the lack of a consistently accurate and reliable source of information. The failure of the impacted communities to fully utilize the existing EAS meant that the public was dependant on reports from mass media sources (particularly broadcast radio and television) that often misconstrued events or provided inaccurate information. Even where the EAS was operational or media reports were accurate, the information provided tended to be either over or under inclusive in terms of its relevance to the various areas impacted by the disaster.

Relying on the mass media to get timely, accurate and relevant information to our citizenry poses risks that we can ill-afford. In contrast, TSN systems have the advantage of ensuring that the information delivered to the public is both uniform and tailored to the audience. TSN systems can deliver consistently worded messages to as many or as few recipients as is appropriate given the circumstances. Thus, for example, in the event of a health crisis, times and instructions for the receipt of medical treatment could be delivered on a neighborhood-by-neighborhood basis, minimizing the risk of institutions being overwhelmed by panic-stricken citizens.

A related advantage of TSN systems is that they permit governmental entities to communicate emergency information through a familiar voice of authority, be it the voice of a mayor, county executive, governor, school superintendent or another recognized "credible spokesperson." The benefit of using a "credible spokesperson" to speak to the public in times of emergency is widely recognized.[4] As Dr. Julie Gerberding, the Director for the Centers for Disease Control and Prevention, said in the context of communicating to the public about a smallpox threat, "Now, people really look toward the most credible spokesperson, especially when there is a lot of uncertainty on an issue, and that's going to be very important and helpful to us to have people at the local level that are trusted and credible come out and be able to educate people about this. We're really counting on that."[5] Only an emergency notification system that allows a single point of presence to formulate and deliver the message can achieve the goal of a "credible spokesperson."

Advanced TSN systems offer interactive functionality, including call delivery reporting. Advanced TSN systems are interactive, allowing the government entities that use the system not only to create and send messages, but also to receive information in response. For example, the "sending" party can deliver a TSN message that requests the receiving party's location or that inquires whether the receiving party needs assistance; the receiving party, by using his or her phone's touch-tone capability, can provide an appropriate response, thereby facilitating urgent relief efforts. This interactive capacity allows those engaged in emergency management to determine whether their messages have been received – an important advantage over anonymous, one-way broadcast technologies.

Another significant feature of advanced TSN systems is their superior reporting capability. For example, NTI's advanced TSN technology allows the originator of the emergency communication to receive a report of successful and unsuccessful message deliveries – distinguishing between "live" reception, voice-mail reception, non-reception and non-working numbers – all within minutes of sending the message. The sender then has the option to resend calls to those who did not receive the message.

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[4] *See* A Guide for Developing Crisis Communications Plans, Michigan Crisis and Emergency Risk Communications, Michigan Office of Public Health Preparedness, http://www.michigan.gov/documents/Michigan_Crisis_Emergency_and Risk_Communication3_82364_7.doc (Oct. 2003); "Emergency Management Plans," Kevin Brown, MD, http://www.gnyha.org/eprc/general/presentations/20030204_Emergency_Plans.pdf.

[5] Interview with Dr. Julie Gerberding, Online NewsHour, http://www.pbs.org/newshour/bb/health/july-dec02/gerberding_smallpox.html.

TSN systems possess multi-lingual capability. Another issue raised by the Katrina Panel was the need to ensure that emergency information was available to non-English speaking Americans. TSN systems can be and are used to deliver messages (and receive responses) in a number of different languages. As a result, broad utilization of TSN providers would help address the concern raised by the Katrina Panel regarding the need to improve the provision of multilingual emergency communications in areas in which languages other than English are of primary fluency.

TSN technology can manage increased scalability. Predecessor notification systems are not scalable because they are limited by the number of phone lines to which they are connected. For example, implementing a standard auto-dialer system typically involved the deployment of pieces of equipment supported by between 24 and 96 phone lines. And while it was possible for such a system to increase capacity by adding additional phone lines, doing so would risk overloading the local network as discussed above. In short, the types of automated notification systems that pre-date advanced TSN technology simultaneously are too large, in terms of costs, equipment and maintenance, and too small, in terms of their ability to send vast amounts of messages quickly.

In contrast, the users of TSN technology face far fewer limitations, as the systems on which they rely are built to scale and can send outbound calls through a number of different telecommunications carriers' networks, assuming that they have entered into the necessary agreements to do so. This carrier redundancy allows TSN systems to far exceed the volume of calls of a predecessor system.

TSN systems are reliable and user-friendly. TSN providers' use of multiple power interconnects and multiple telecommunications carriers means that an outage at one point of the network will not terminate a user's ability to send messages. Predecessor systems are susceptible to a single point of failure, which can occur at many points of the message's path – such as an operational problem with the predecessor system's machines or a flood, fire, or electrical outage at the site of the predecessor system's equipment center. Due to cost constraints, most users of predecessor notification systems do not add redundant equipment or back-up power to their systems. Thus, these systems remain prone to the "single point of failure" problem.

TSN systems, on the other hand, use their power and carrier redundancies to send hundreds of thousands of calls each day, compiling a reliability record that far exceeds that of predecessor systems. TSN systems also enjoy a higher success rate in recognizing answering machines than most predecessor systems. Using its advanced TSN technology, NTI successfully placed more than 54 million time-sensitive calls in 2005, and is currently delivering more than ten million time-sensitive calls per month.

TSN systems are well-suited for use in rural areas. Rural users of TSN technology (including local and state governments) can obtain a reliable means by which to communicate more quickly with the general public for less cost than predecessor systems. Because TSN systems utilize a "hosted" application, TSN system users, including those in rural areas, do not have to pay for maintenance of equipment, as they would with predecessor systems. In addition to offering the advantage of a lower cost structure, TSN technology has proven reliable in completing a large number of calls in a concentrated geographic area which are the conditions that would face a rural community during an urgent situation. Most importantly, the ubiquity of land-lines, coupled with the rapid adoption rate of cell phones, ensures that residents of rural areas will have access to up-to-date information relevant to their specific geographic location.

Operationally, TSN providers' geographic and carrier redundancies facilitate least-cost routing of calls. Should a user/owner of a predecessor system wish to repeat the same level of redundancy at the data center and call origination center level, significant costs would be incurred to establish and maintain such facilities. TSN providers are able to defray the costs of redundancies, SLAs, insurance, customer service maintenance, and

upgrades across thousands of users rather than just one making them the best choice given current available options.

TSN technology is compatible with other alerting standards. The FCC has long recognized the importance of compatible alerting technologies to inform and safeguard the American public during emergencies.[6] TSN systems are compatible with other alerting standards, such as Common Alerting Protocol ("CAP"). If the FCC was to choose CAP a baseline alerting architecture, most TSN systems would be able to communicate seamlessly with the rest of the Commission's EAS network.

Examples of Emergency Communications via TSN Systems

As noted, the Katrina Panel identified a number of shortcomings in the performance of emergency communications systems before, during, and after last summer's catastrophic storms. However, the Panel also cited some success stories. One of the bright spots noted by the Panel was the performance of new technologies, such as TSN technology. Indeed, NTI's ***Connect*-ED®** TSN system was used by school systems in the areas affected by the storms to deliver over 2.3 million hurricane-focused messages to members of the public. Examples of how TSN technology supplemented and enhanced information provided by traditional EAS means include the following:

- Before and after both Hurricane Katrina and Hurricane Rita, the East Baton Rouge Parish School district used the ***Connect*-ED** system to send urgent messages to more than 34,000 phone numbers to inform families and employees about school closings. In all, the district sent over 11 hurricane-related messages to their constituents.
- After Hurricane Katrina made landfall, the Lafayette Parish School District sent messages to nearly 300 transportation employees to request that they volunteer their assistance in a city-wide rescue operation. The parish also delivered several messages to over 56,000 phone numbers regarding pre- and post-Katrina school closings and reached over 61,000 phone numbers with advance information regarding Hurricane Rita.

I could give you numerous other examples. However, there is one particular example that merits a more detailed description. In advance of Hurricane Katrina, the St. Charles Parish school district used TSN technology to send out an evacuation message to over 21,000 phone numbers. Moreover, the use of TSN to provide information to the residents of the parish did not end with the pre-storm notices. The school district's communications director, Rochelle Cancienne, continued to send TSN messages in the storm's aftermath in order to assist the parish's Emergency Operations Center in communicating with a community that was largely un-served by television or radio due to power outages and other service disruptions. Working with NTI's client care center – sometimes in the middle of the night or pre-dawn hours – Ms. Cancienne was able to use her cell phone to send TSN messages reassuring residents that the reports that were being circulated by the media regarding the extreme devastation wrought by the storm were not reflective of the conditions in their particular parish. Specific examples of the kinds of information sent out using TSN technology included:

- information regarding the extent and location of damage within the parish and the reconstruction and reopening of the parish's schools;
- job-related information targeted to school district employees (the largest employee base in the parish); and

[6] *See Amendment of Part 73, Subpart G, of the Commission's Rules Regarding the Emergency Broadcast System,* 10 FCC Rcd 1786, ¶ 174 (1994).

- information targeted specifically to the families of the additional students re-located to the parish from other school districts in the greater New Orleans area.

In total, the school district successfully completed more than 114,000 calls to some 21,000 residents over a 27 day period, a remarkable achievement given that the local telephone infrastructure was greatly distressed due to the hurricane.

The use of TSN technology before, during, and after Hurricane Katrina played a key role in holding the St. Charles Parish community together in a time of extraordinary crisis. As Ms. Cancienne has noted, prior to deploying NTI's TSN system, the school system's most effective means of mass communications was over the PA system at Friday night football games

The use of TSN technology also provided ancillary benefits by helping the Parish's Emergency Operations Center to monitor the capacity of the local telephone lines by constantly analyzing their call delivery reports. Message delivery success rates in the school district dipped as low as 8% on August 29th but climbed back up to 28% just seven days later. Within a month, the district was back to a standard +80% success rate. In the future, the district has proposed working with the phone company to overlay data to determine where outages have been repaired.

As a result of its experience in using TSN technology during a major crisis, St. Charles Parish School District is now collecting contact information from all staff members and the parents of children enrolled in its schools three (3) times per year rather than once per year in order to ensure that data is up-to-date. Furthermore, the district is accepting relocation contact information so that they can communicate with staff and families who have evacuated – improving the likelihood that local citizens will receive important information from community officials even when local telephone lines might be impacted within the parish itself.

TSN Technology and the WARN Act

The examples given above all involve the use of TSN technology by school officials to communicate with parents and staff. This reflects the fact that TSN services (such as NTI's ***Connect*-ED** service) principally have been targeted to educators as a tool not only for use in emergency communications (such as school lock downs, weather closings, etc.), but also on a daily basis for parent-teacher outreach and attendance monitoring. However, in light of the significant role that TSN systems were able to play in providing essential information during last year's storms, a growing number of municipalities are expressing interest in utilizing the technology as a key component of their community-wide emergency response programs. NTI has recently launched a new service, called the ***Connect*-CTY™** service, in response to this demand.

The best way for local communities to enhance their emergency communications capabilities to incorporate technological advances such as TSN technology is through voluntary public/private efforts. For example, in comments filed in the FCC's ongoing EAS proceeding, NTI has urged that the agency include TSN services in funded pilot programs. NTI also has urged the FCC to recognize TSN systems as "eligible services" under the E-rate program.

The WARN Act is of crucial importance because it reflects a clear recognition of the limitations of current emergency notification systems. The Act provides for the establishment of a National Alert System ("NAS") whose functions already are achievable with TSN technology. For example, the Act calls for an NAS that:

- will "supplement existing Federal, state, or local emergency warning and alert systems";

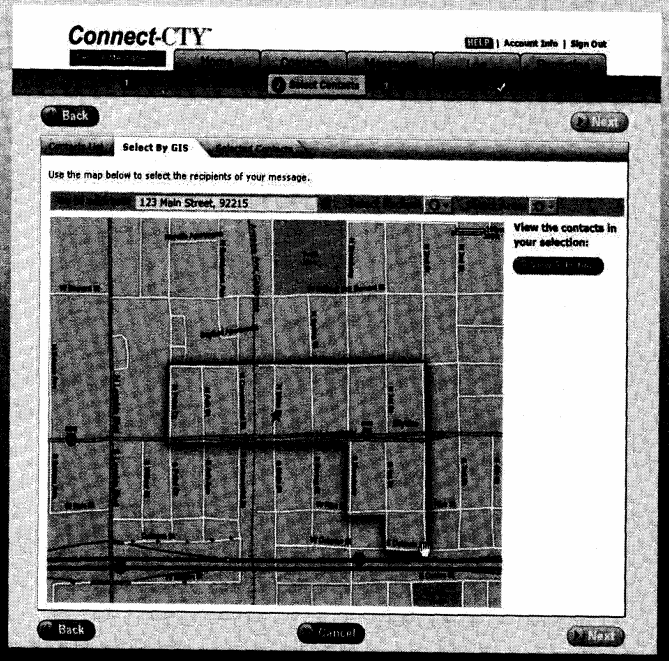
- will "be designed to provide alerts to the largest portion of the affected population feasible" and to "improve the ability of remote areas to receive alerts";
- will be "flexible enough in its application to permit narrowly targeted alerts";
- will "not require members of the public to activate a particular device"; and
- will provide "secure widely dispersed multiple access points" and "system redundancies to ensure functionality in the event of power system failures" or other interruptive events.

As described above, TSN technology meets these statutory goals today. TSN systems already are being used to supplement the existing EAS and for providing alerts to the affected population, including targeted alerts to specific at-risk groups. It is well-suited for use in rural areas and does not require the activation of a particular device. Finally, multiple access points and redundancies that ensure the system's functionality are inherent in the design of enhanced TSN services.

There is no question that we, as a nation, need to be forward-looking in our thinking about emergency communications and we simply cannot wait another four or five years before upgrading our alert capabilities to take advantage of advanced technologies. In particular, we believe there is an immediate need for pilot programs that will demonstrate the feasibility of incorporating existing enhanced technologies into an improved national alert system. As the provider of one such advanced alerting system, we heartily endorse the WARN Act and look forward to working with members of the Subcommittee as the bill moves forward.

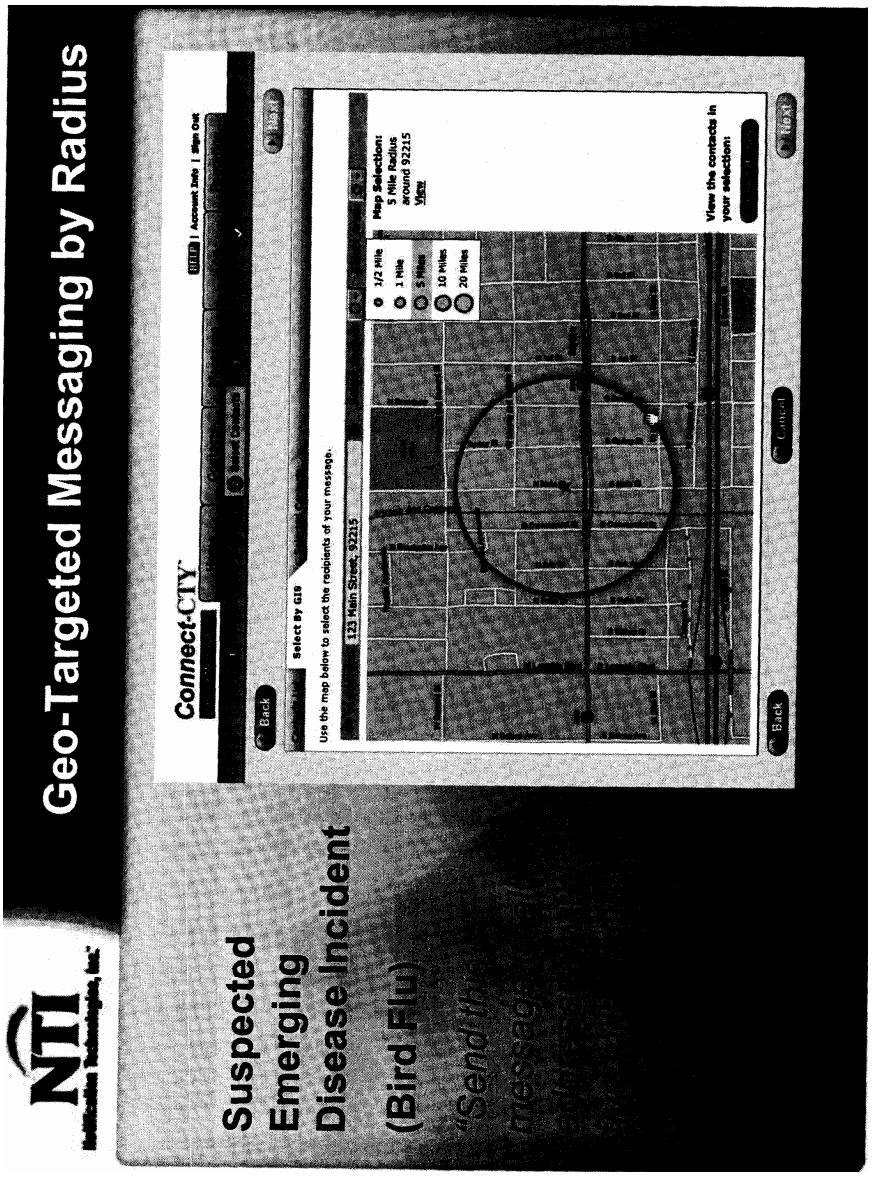
NTI
Notification Technologies, Inc.

Geo-Targeted Messaging by Polygon



A chemical spill has just occurred.

"Send this message to all addresses within a five square block area."



MR. UPTON. Thank you. Mr. Jackson.

MR. JACKSON. Good morning, Chairman Upton, Mr. Markey, and members of the subcommittee. My name is Michael Jackson. I am the Sheriff of Prince George's County, Maryland. I appear before you today on behalf of one of the largest counties in the National Capital Region. Currently, I also serve as the First Vice President of the Maryland Sheriffs' Association and the Secretary/Treasurer for the National Sheriffs' Court Officers & Deputies Association. Before I begin, I

would also like to take this time to thank Congressman Albert Wynn for his leadership on the critical issue of national alert communications and for recommending that I appear here today.

First, I want to applaud the original co sponsors of H.R. 5785, the WARN Act, for their vision and foresight in realizing the need for updating the Nation's Emergency Alert System. Modernization of emergency communications for the public is essential for a sound homeland security policy. Even more important is that a new system incorporate new forms of communication such as cell phone and Blackberries. I am pleased to say the WARN Act does just that. I would like to commend the wireless industry for combining their efforts with the National Center for Missing and Endangered Children, NCMEC, and law enforcement agencies. The wireless Amber Alerts initiative will be a catalyst for the wireless industry's more than 200 million wireless subscribers to aid in the return of an abducted child. The NCMEC is solely responsible for creating the content for an alert distributed to wireless carriers through Syniverse Technologies.

Prince George's County, Maryland, is located in the heart of the Baltimore/Washington corridor. The county borders Washington, D.C., and is just 37 miles south of the City of Baltimore. The population exceeds 820,000 with a daily work population of over one million. Covering an area of close to 500 square miles, the county is home to many businesses, as well as State and Federal agencies. Some of the Federal agencies include NASA's Goddard Space Flight Center, Andrew's Air Force Base, which is home to Air Force One, several Smithsonian support centers, the Federal Census Bureau, U.S. Department of Agriculture's Beltsville facility, the Federal Records Center, a large IRS office complex, and the NOAA Center for Weather and Climate Prediction, a critical partner in building and maintaining the national alert system. Additionally, a large part of the region's Metro system and Interstate 95 will pass through Prince George's County.

For most communities in America, the threat of terrorism remains just that, a threat. Only two areas in the United States have experienced the heinous acts of foreign-born terrorism and understand the need to support public alertness as well as first responder emergency communications interoperability. Therefore, Prince George's County is in a prime position to offer perspectives on how to address the need, impact, and practicality of a new public alert system. Prince George's County is a prime target for a terrorist attack because of its close proximity to the District of Columbia.

What I have just explained is the grim reality facing the National Capital Region. A modern national alert system could have helped the public during 9/11. However, H.R. 5785 is only the first step in a long

road ahead toward not just notifying the public, but our first responders as well. One of the best provisions of the bill is that the Federal, State, and local emergency managers can input alerts into the system and have them directed out to a geographically targeted section of the population. As public safety officers, we have been watching our Nation grapple with homeland security implementation issues highlighting how critical congressional oversight is to the process.

To that end, I urge that the lawmakers use this system as a platform to draw attention to not just a well-informed public, but a well-wired first responder community. It is almost ironic that we are discussing the system now in the face of dangerous cuts to Urban Areas Security Initiatives, UASI, and constant reductions in funding for the Nation's first responder grant programs. Just last month, Maryland officials testified to the House Government Reform Subcommittee on national security stating how much the cuts to UASI would devastate State homeland security preparedness operations. My Sate sustained more than a 50 percent cut to UASI for the National Capital Region. Maryland officials testified to House Members that they thought if they had done nothing and not even filled out the UASI application for 2006, they would have received around $10 million. In reality, Maryland received $8 million.

Prince George's County is in a unique position when it comes to emergency communications, as we are the only county in the National Capital Region that does not have an interoperable radio system. We are the hole in the communications net that covers the Capital Region. The County Executive is committed to fixing this problem and fast. But a $75 million plus pricetag makes this a daunting task. This is not a county need; this is a regional need with national implications.

We would recommend that the National Alert System Working Group have at least one public safety official and/or local government executive from a locality with the National Capital Region, ensure that the National Alert Office in the National Telecommunications and Information Administration coordinate with the appropriate Federal agencies to provide expertise on the best methods to assess the government's disaster preparedness, consider an advance alert and local government participation requirement for county executives and mayors so that they are notified in advance if an emergency alert is going to be broadcast in their jurisdictions.

Challenges ahead include what 9/11 and Hurricane Katrina have taught us that the local alerts are not enough. Perhaps with a regional warning system in place, the jurisdictions in surrounding areas directly affected could have provided a quicker and more efficient response, allowing more time for agencies such as FEMA and the Red Cross to

properly implement their aid and service plans. I can say confidently that local public safety officials are ready to work with you in making a modern national alert system a reality. I thank you for your time.

[The prepared statement of Michael Jackson follows:]

PREPARED STATEMENT OF SHERIFF MICHAEL JACKSON, VICE PRESIDENT, MARYLAND SHERIFFS' ASSOCIATION

I. INTRODUCTION

Good morning, Chairman Upton, Congressman Markey, and Members of the Subcommittee, my name is Michael A. Jackson. I am the Sheriff of Prince George's County, Maryland. I appear before you today on behalf of one of the largest Counties in the National Capitol Region. Currently, I also serve as the 1st Vice-President of the Maryland Sheriff's Association and the Secretary/Treasurer of the Court Officers Board Association.

Before I begin, I also want to take this time to thank Congressman Albert Wynn for his leadership on the critical issue of national alert communications and for recommending that I appear before you today.

II. The WARN Act and the realities facing the National Capitol Region

First, I want to applaud the original co-sponsors of HR 5785, the *Warning, Alert, and Response Network Act* for their vision and foresight in realizing the need for updating our Nation's emergency alert system. Modernization of emergency communications for the public is essential for a sound homeland security policy. Even more important is that a new system incorporate new forms of communication such as cell phone and Blackberries; I'm pleased to say the WARN Act does just that.

I would also like to commend the wireless industry for combining their efforts with the National Center for Missing and Endangered Children (NCMEC) and law enforcement agencies. The wireless AMBER Alerts Initiative will be a catalyst for the wireless industry's more than 200-million wireless subscribers to aid in the return of an abducted child. The NCMEC is solely responsible for creating the content for an alert distributed to wireless carriers through Syniverse Technologies.

Prince George's County, Maryland is located in the heart of the Baltimore/Washington corridor. The county borders Washington, DC and is just 37 miles south of the City of Baltimore. The County's population exceeds 820,000 with a daily work population of well over one million. Covering an area of close to 500 square miles, the County is home to many businesses, as well as state and federal agencies. Some of the Federal agencies include NASA's Goddard Space Flight Center, Andrew's Air Force Base, several Smithsonian support centers, the Census Bureau, U.S. Department of Agriculture's Beltsville facility, a Federal Records Center, a large Internal Revenue Service office complex, and the NOAA Center for Weather and Climate Prediction – a critical partner in building and maintaining the National Alert System. Additionally, a large portion of the region's Metro system and Interstate 95 pass through Prince George's County.

For most communities in America, the threat of terrorism remains just that; a threat. Only two areas of the United States have experienced the heinous acts of foreign-born terrorism and have led all of us to understand the need to support public alertness as well as first responder emergency communications interoperability. Prince George's County is a prime target for a terrorist attack because of its close proximity to the District of Columbia. Therefore, Prince George's County is in a prime position to offer perspectives on how to address the need, impact, and practicality of a new public alert system.

III. The WARN Act, a good first step in a long journey ahead

What I have just explained is the grim reality facing the National Capitol Region. As I have stated, a modern national alert system could have helped the public during 9/11. However, HR 5785 is only the first step in a long road ahead toward not just notifying the public, but our first responders as well. One of the best provisions of the bill is that federal, state and local emergency managers can input alerts into the system and have them directed out to a geographically targeted section of the population. However, as a local official, I can not help but reflect on the complete bureaucratic paralysis that crippled an effective response to Hurricane Katrina. As public safety officers, we have been watching our national government grapple with control and oversight problems with the vast management challenges involved in homeland security.

To that end, I urge that lawmakers use this system as a platform to draw attention to not just a well informed public, but a well wired first responder community. It is almost ironic that we are discussing this system now in the face of dangerous cuts to Urban Areas Security Initiatives and constant reductions in funding for the Nation's first responder grant programs. Just last month, Maryland officials testified to the House Government Reform Subcommittee on National Security stating how much the cuts to UASI would devastate State homeland security preparedness operations. My state sustained more than a 50% cut to UASI for the National Capitol Region. Maryland officials testified to House members that they thought if they had done nothing and not even filled-out the UASI application for 2006, they would have received around $10 million. In reality, Maryland received $8 million.

Prince George's County is in a unique position when it comes to emergency communications, as we are the only county in the NCR that does not have an interoperable radio system. We are the hole in the communications net that covers the Capitol Region. The County Executive is committed to fixing this problem and fast. But, a $75 million plus price tag makes this a daunting task. This is not a County need; this is a regional need with national implications. We have been working hard to secure Federal assistance in plugging the only hole in the net.

IV. Recommendations

In looking at the WARN Act, we would make the following recommendations:

- We would recommend the "National Alert System Working Group" have at least one public safety official and/or local government executive from a locality within the National Capitol Region.
- Ensure that the National Alert Office in the National Telecommunications and Information Administration coordinate with the appropriate federal agencies to provide expertise on the best methods to assess the government's disaster preparedness.
- Consider an advance alert and local government participation requirement for County Executives and Mayors so they are notified in advance if an emergency alert is going to be broadcast in their jurisdiction so they can take steps to mobilize resources.

V. Challenges Ahead

9/11 and Hurricane Katrina have taught us that local alerts are not enough. Perhaps with a regional warning in place, the jurisdictions surrounding areas directly affected could have provided a quicker and more efficient response, allowing more time for agencies such as FEMA and the Red Cross to properly implement their aid and service plans.

I can say confidently that local public safety officials are ready to work with you in making a modern national alert system a reality. On the ground, we have seen the terrible

consequences of poor oversight over homeland security initiatives. We have also seen the great strides made in building a more informed, more aware public.

When a person receives an alert on their cell phone or otherwise, they appreciate the information. However, the next thought that will occur to them will be will be "how can I get to my family as quick as possible?" At that point our inquiry turns to transportation and two-way communication built to handle a disaster volume of interface from the public. Thus, this truly important first step of many and I thank you for taking it.

I look forward to answering any questions you may have.

MR. UPTON. Thank you. Ms. Allen.

MS. ALLEN. Good morning ladies and gentlemen. Thank you to the committee, Mr. Chairman, and all of you for inviting me here today. I am Sara Allen, President and Senior Radio Engineer. I am also a consultant for KTAO-FM in Taos, and KTAO has recently celebrated 14 and a 1/2 years of transmitter operations using only solar energy. I was a member of the Federal Communication Commission's Media Security and Reliability Council, and we were tasked with developing disaster recovery planning tools for all forms of mass media in the United States, and I am happy to say we accomplished that task.

Today I am here to represent the Prometheus Radio Project. It is an advocacy group for the low power radio movement, LP-FM movement, and to present testimony that shows how important the expansion and protection of low power FM radio is to the emergency service and communications needs of this country. Low power FM radio is a popular and important service that allows churches, schools, and community organizations to operate locally operated non-commercial radio stations. In 1999, the FCC created a new class of LP-FM stations, leading to hundreds of new stations across the country.

While these low power FM stations serve a critical ongoing role in the communities they serve, I am here to speak specifically about the important role that local community radio, low power FM in particular, plays in an emergency and in the recovery of neighborhoods and towns after a disaster. I hope you will agree that we must protect these stations and expand possibilities for communities to build them. Low power radio plays a unique role in the FM band. While full power stations are designed to serve entire metropolitan areas, LP-FM stations are, by definition, focused on very specific geographic targets.

I want to tell you a success story. It is the story of how Federal, State, and county government, private industry, and volunteers combined to create a radio station capable of covering a county-wide area. WQRZ-LP is located in Bay St. Louis, Mississippi, and is the effort of Brice Phillips, a disabled amateur radio operator who foresaw disaster and several years ago made the effort to obtain authorization. His motive is to ensure that the citizens of Hancock County, Mississippi have a reliable and continuous Emergency Alert System.

After Katrina made landfall, I offered by sending offers of assistance to every Gulf Coast broadcaster association, as well as the Society of Broadcast Engineers. On Tuesday, September 6, I received a call from John Poray, National Director of the SBE, requesting assistance for WQRZ. I coordinated an effort to request an emergency authorization from the Federal Communications Commission which was granted. I also arranged for the necessary equipment to be ordered and shipped into Hancock County. Working closely with Harris Corporation, the necessary equipment was on its way by Friday evening and began arriving on site by Saturday morning.

On Sunday morning, September 11, Broadcast Engineer Gary Sessums and I departed from the Hillsborough County EOC in Tampa, bound for Bay St. Louis and the Hancock County EOC. We arrived that evening and joined Gary Minker, also a Floridian, and planned our work for the following day. On Monday morning the three of us joined Brice and we began the reconstruction of WQRZ at Brice's surviving 120 foot tower. Brice's home was totally destroyed by the storm surge. His transmitter shack, which had been totally submerged in salt water, and his tower, survived Katrina. Brice had taken one of the antenna bays, his transmitter, and some essential studio equipment to the Hancock County EOC where he continued to broadcast before, during and immediately after Katrina. He also provided health and welfare radio traffic using his amateur radio and was the only means of communications in and out of Hancock County EOC immediately after Katrina.

Brice climbed the tower several times during the next few days and by Thursday evening WQRZ-LP went on the air, the signal strong enough to cover Hancock County and the most affected areas, Pearlington, Bay St. Louis, Waveland, Diamondhead, Pass Christian and Kiln, Mississippi. We switched programming from Brice's low power operation at the old EOC to the studio we had set up at the New Hancock County EOC, located near the Stennis International Airport. I was making plans to return to Tampa. Tools were put away and the studio was organized and ready for use. I overheard someone in the Public Information Office mention a press release requesting assistance to operate WQRZ, and I volunteered and so it began.

You are listening to WQRZ-LP 103.5 FM, the voice of Bay St. Louis, Waveland, Diamondhead and the Kiln, broadcasting live from the Hancock County Emergency Operations Center, your source for information. I reported for duty Friday morning and went about developing a program strategy with the Public Information Office. The first day was a bit loose. I played music and broadcast news and information updates as frequently as the PIO made them available. I overheard talk that the Secretary of Homeland Security, Michael

Chertoff, would be visiting the EOC, and as I was passing by the FEMA office, I noticed that he was there and he offered me his hand. I shook it. The broadcaster in me took over, I didn't let go and I followed it back to him and said, sir, I would like to put you on the radio to address the people of Hancock County.

He agreed and became the first of many VIP guests on WQRZ. This led to ongoing access to VIP interviews, which included a congressional delegation, Vice Admiral Thad Allen, Undersecretary Thomas Dorr, and many other locals and volunteers who shared their stories with WQRZ listeners. By the end of the week, I had developed programming with regularly scheduled in-depth updates at 8:00, noon and 5:00. The PIO developed a daily newsletter which I read in its entirety. Whenever information was updated, I was able to immediately go on the air with the new, accurate information.

And then Hurricane Rita arrived. There was a new round of flooding in Hancock County and the EOC was alerting people to move to higher ground. Hurricane Rita affected us in many ways. It put a strain on already compromised systems and the EOC lost grid power. A damaged air handler motor caused a fire alarm in the building just as a tornado warning was being broadcast by the EAS. Brice was on the air and not about to be evacuated by fire safety personnel, while he was broadcasting the warning which included the EOC in the tornado's path.

MR. UPTON. Ms. Allen, you exceeded your 5 minutes by 2 minutes, and if you could just summarize. We are having votes on the floor very shortly.

MS. ALLEN. Okay. I will do that. To summarize, full power stations should not be allowed to encroach on LP-FM stations. This will ensure that LP-FM stations will be able to broadcast accurate local emergency and disaster information without interference and that the communities don't lose this trusted source of information when they need it most. There are many other stories of success and support from low power and community radio stations licensed to churches, schools, municipalities, and community groups. Thank you the committee for giving me the opportunity to speak with you, and I will be happy to answer any questions regarding low power FM.

[The prepared statement of Sara Allen follows:]

PREPARED STATEMENT OF SARA ALLEN, SENIOR RADIO ENGINEER, CIARA ENTERPRISES, INC., ON BEHALF OF PROMETHEUS RADIO PROJECT

Good morning ladies and gentlemen. Thank you to the Committee, the Committee Chair, and to all of you for asking me here today.

My name is Sara T. Allen, President of Ciara Enterprises, Inc. and Chief Consultant for KTAO-FM in Taos, NM. KTAO recently celebrated 14 years of transmitter operations using ONLY Solar Power!

I am also a member of the Federal Communications Commission's Media Security and Reliability Council 2, Toolkit Workgroup Committee, which was tasked with developing Disaster Recovery Planning Tools for all forms of Mass Media in the U.S.

Today I am here to represent The Prometheus Radio Project, an advocacy group for the low power FM radio (LP-FM) movement, and to present testimony that shows how important the expansion and protection of low power FM radio is to the emergency service and communications needs of this country.

Low Power FM radio is an extremely popular and extremely important tool that allows churches, schools and community organizations to operate very small, locally operated non-commercial radio stations. In 1999, the FCC created a new class of LPFM stations, leading to hundreds of new stations across the country.

Unfortunately, Congress passed legislation blocking the FCC from modernizing their interference protection rules pending further technical study on the impact of placing these tiny stations between existing full-power stations. Because of this legislation, hundreds of potential community stations have been blocked from the airwaves. The FCC commissioned a $2.2 million study from the Mitre Corporation, and submitted their findings to Congress three years ago. The Senate Commerce Committee has twice voted in support of legislation that would allow the FCC to grant new LPFM licenses in urban markets. We ask that the House of Representatives also consider this legislation.

While these Low Power FM stations serve a critical ongoing role in the communities they serve, I'm here to speak about specifically about the important role that local community radio, low power FM in particular, plays in an emergency and in the recovery of neighborhoods and towns after a disaster. I hope you'll agree that we must protect these stations and expand possibilities for communities to build them.

Low Power Radio plays a unique role in the FM band. While full power stations are designed to serve entire metropolitan areas, LPFM stations are, by definition, focused on very specific geographic targets.

The first story I want to tell is the story of the attempt to provide Low Power FM radio services to the displaced citizens, victims of Hurricane Katrina, who were living in the Houston Astrodome. People need information. Several Houston community members developed a plan to build and operate a community radio station located inside the Astrodome. The proposed station "Evacuation Radio Services," would broadcast essential information.

The Prometheus Radio Project was contacted for assistance and recommended that the Houston group contact the FCC to request an STA. In very short order the FCC granted authorization. Despite the quick action from the FCC, the Houston community group ran into bureaucratic resistance from the local officials at the Astrodome. Even with the support from the Senate Office of Kay Bailey Hutchinson, City Council members and the Mayor of Houston, Harris County officials refused to grant permission to allow the radio station to proceed.

Eventually, a licensed radio station was set up outside the Astrodome and did provide essential information to the displaced residents. FEMA notices, health notices, and vital travel information were shared with the residents, and the residents were able to tell their own stories and connect with families and friends after the disaster.

The bureaucratic delays prevented the timely broadcast of important information to the residents. The Houston Astrodome officials' reliance on their "loudspeaker" public address system led to the confusion and frustration of the residents.

Ladies and Gentlemen, anyone who has ever tried to understand what is being said over a stadium loudspeaker will agree that it is a very poor choice for communications of essential and detailed information. If Congress had already acted to expand low power FM radio to Houston, there would have been more potential choices for the residents at

the Astrodome and displaced families across the Gulf to respond quickly and appropriately to their local needs.

The next story is a success story. It's the story of how Federal, State, and County Government, private industry and volunteers combined to create a radio station capable of covering a county wide area.

WQRZ-LP is located in Bay St. Louis, Mississippi and is the effort of Brice Phillips, a disabled amateur radio operator who foresaw disaster and several years ago made the effort to obtain authorization. His motive is to insure that the citizens of Hancock County have a reliable and continuous Emergency Alert System.

After Katrina made landfall, I offered my help by sending offers of assistance to every Gulf Coast Broadcaster Association, as well as the Society of Broadcast Engineers.

On Tuesday, Sept. 6th I received a call from John Poray, National Director of the SBE requesting assistance for WQRZ-LP. I coordinated an effort to request an emergency authorization from the FCC which was granted. I also arranged for the necessary equipment to be ordered and shipped into Hancock County. Working closely with Harris Corp. the necessary equipment was on its way by Friday evening and began arriving on site Saturday morning.

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On Monday morning the three of us joined Brice and we began the reconstruction of WQRZ-LP at Brice's surviving 120 foot tower. Brice's home was destroyed by the storm surge. His transmitter shack, which had been totally submerged in salt water, and his tower, survived Katrina. Brice had taken one of the antenna bays, his transmitter and some essential studio equipment to the Hancock County EOC where he continued to broadcast before, during and immediately after Katrina. He also provided health and welfare radio traffic using his amateur radio and was the only means of communication in and out of the Hancock County EOC immediately after Katrina.

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We switched programming from Brice's low power operation at the old EOC to the studio we had set up at the new Hancock County EOC located near the Stennis International Airport.

I was making plans to return to Tampa. Tools were put away and the studio was organized and ready for use. I overheard someone in the Public Information Office mention a press release requesting assistance to operate WQRZ-LP.

I volunteered. So it began.

"You're listening to WQRZ-LP 103.5 FM - The Voice of Bay St. Louis, Waveland, Diamondhead and the Kiln – Broadcasting live from the Hancock County Emergency Operations Center – Your Source for Information"

I reported for duty Friday morning and went about developing a program strategy with the Public Information Office. The first day was a bit loose. I played music and broadcast news and information updates as frequently as the PIO made them available.

I overheard talk that the Secretary of Homeland Security, Michael Chertoff, would be visiting the EOC and as I was passing by the FEMA office I noticed that the he was there and he offered me his hand which I shook, and then the broadcaster in me took over, I didn't let go of his hand and followed it back to him and said "Sir, I would like to put you on the radio station to address the people of Hancock County."

He agreed and became the first of many VIP guests on WQRZ-LP. I hadn't realized at the time that I was bucking protocol and I was informed later that day that I was lucky

that I hadn't been "secured" by the Secret Service. I did, however, gain the notoriety and respect of the EOC leadership which led to ongoing access to VIP interviews which included a Congressional Delegation, Vice Admiral Thad Allen, Undersecretary Thomas Dorr, and many other locals and volunteers who shared their stories with the WQRZ-LP listeners.

By the end of the first week I had developed programming with regularly scheduled in-depth updates at 8, noon and 5. The PIO developed a daily newsletter which I read in its entirety. Whenever information was updated I was able to immediately go on the air with the new, accurate information.

Hurricane Rita arrived. There was a new round of flooding in Hancock County and the EOC was alerting people to move to higher ground.

Hurricane Rita affected us in many ways. It put a strain on already compromised systems and the EOC lost grid power. A damaged air handler motor caused a fire alarm in the building just as a Tornado Warning was being broadcast by the EAS. Brice was on the air and not about to be evacuated by fire safety personnel while he was broadcasting the warning which included the EOC in the tornados' path. That was an exciting moment.

WQRZ-LP was off the air. Flood waters had prevented easy access to the transmitter site and logistics was unable to refuel the generator. Brice decided to take matters into his own hands and floated 10 gallons of diesel fuel wading several hundred yards through the flood waters to make sure the citizens of Hancock County had access to important EOC and EAS information. Thanks to his efforts WQRZ-LP was back on the air, but as a consequence, Brice came down with bronchitis and pneumonia and I stayed at the radio station for another week while he recuperated. I insisted that he take the time to recover so that he wouldn't relapse and I could return home. Brice took my advice and rested until he had recovered and he was able to once again take over the controls at WQRZ-LP. Brice continues to bring the residents of Hancock County essential news and information directly from the EOC and will continue to do so as long as necessary. As you will read about in the packet of information I've brought, WQRZ-LP served and continues to serve as a lifeline for the residents of Bay St. Louis and Hancock County, Mississippi. With a new amendment to expand low power FM on H. R. 5785, this committee can bring stations like WQRZ-LP to hundreds, if not thousands, of communities that need them.

I lived and worked at the Hancock County EOC for 28 days. Bay St. Louis, Waveland, Diamondhead and the Kill will no longer be just a place on the map, but for me, a place that I called home.

LP-FM radio stations have proven to be a valuable resource before, during and after disaster. To continue this service and improve upon it, organizers from the Low Power FM community make the following recommendations to Congress:

To ensure that the greatest numbers of LP-FM stations are available and able to provide service and information in times of emergency and disaster, this Committee can amend the language of Senate Bill 312, sponsored by Senators John McCain, Maria Cantwell, and Patrick Leahy, onto House Bill 5785. This same language was recently amended to Senator Stevens' telecommunications bill, SB 2686, with a vote of 14 for, and 7 against. Senate Bill 312 would expand low power FM radio to frequencies that were restricted for five years, while the FCC studied whether or not there would be interference to existing stations from new LPFM stations. Now that the Commission has proven with a 2.2 million dollar study that there is room for these essential stations on the dial, we hope you will move quickly to amend this bill to expand low power FM radio.

Furthermore, this Committee can move to protect those low power FM stations on the air. As you can read in Congresswoman Slaughter's recent bill, HB 3731, many current LP-FM stations are under threat of being knocked off the air by full power broadcasters, leaving hundreds of communities without the local service they need in safety or in disaster.

Full power stations should not be allowed to encroach upon LP-FM stations. This will ensure that LP-FM stations will be able to broadcast accurate local emergency and disaster information without interference and that the communities don't lose this trusted source of information when they need it most.

There are many other stories of success and support from low power and community radio stations, licensed to churches, schools, municipalities, and community groups, included in the packet I've brought. To reiterate, it is community radio which is so vitally placed to provide information, relief and communications before, during and after an emergency. Thousands of volunteers and potential community broadcasters stand by ready to help.

Finally, as an experienced engineer and someone who has worked with stations who use the Emergency Alert System (EAS), I see a great opportunity with HB 5785 to diversify and specify the alerts broadcast to new communities and for new situations. With EAS, a radio station has the option of selecting which alerts it uses, for example -- nuclear attack, weather, child abduction, etcetera. Some alerts are mandatory for the station to broadcast, but others may be selected by the broadcaster when the alert system is first set up.

Low power FM stations broadcast in particular communities may broadcast in many languages, from Hmong to Spanish to Zapotec. It would be ironic and tragic if some listeners could not understand an emergency alert with life saving alert because their English was not yet strong enough to comprehend detailed emergency instructions. It would greatly enhance the efficacy of EAS if it had multiple language capabilities. As I see it this would not require hardware changes or new equipment, just an update of software that seems well worth it, in the service of our communities.

Thank you to the Committee for giving community radio this opportunity to speak.

MR. UPTON. Great. Thank you all for your testimony. I know that we all have a number of questions, and I just would like to relate a story this morning that happened in Michigan. I talked to my dad on the phone this morning, and he said a big storm just came through. It was unbelievable. I don't think it was the same storm that went through St. Louis, but it was a big major thunderstorm that came off of Lake Michigan. And I can remember well about 2 years ago we had one of those microburst storms. It was literally hurricane winds. It was almost unheard of that came across the lake, and it decimated a small area, probably no more than a quarter of a mile, and it went in about a quarter of a mile. It actually moved a 100-foot cement smoke stack an inch off the base in terms of the storm that went through.

It goes back to Mr. Pitts' story about being able to alert folks within a bus stop area or maybe a five-block area in terms of a major storm or an emergency that came through, and I guess, Mr. Pitts, it is difficult to call you that because it is Billy, as you described your system that in essence can be put into place now, you would be able to inform folks within that area based on their telephone number. Is that correct?

MR. PITTS. Yes, sir.

MR. UPTON. And in this specific example what if it was someone--I mean are you able to beam a signal to that specific cell phone or are you able to say that individual lives in Maryland and they are in Washington,

D.C., and therefore that is the five-block area that is going to be picked or what if your cell phone number or your residence number or business originates someplace else and you happen to be there, how does that work? How are you able to funnel it to the people that are in the path of that storm or the path of that emergency? Are you able to do that?

MR. PITTS. There is a difference right now in the technology between landline phones and cell phones.

MR. UPTON. Let us say it is a cell phone or a PDA. I guess yours is just a phone, right, it is not even though I've got both on my Blackberry?

MR. PITTS. The current technology that we are using with respect to municipalities uses primarily landline phones because we have got the latitude, longitude of each, so you could literally go to a map, draw a ring or a polygon around whatever area you wanted to call. Immediately all the residence and business phones would be available to call immediately. We don't quite have the technology now to do that with all cell phones. As was discussed earlier, that is the problem with the E911. I know there are new software developments coming forward. We are working with people on that. So the cell phone technology is currently a problem.

The municipalities input the cell phone numbers in with the residents. We will take up to three different numbers for each residence, two for each business, so they input them. But if the person has the cell phone and is outside the area they would be getting it outside the area.

MR. UPTON. And, Mr. Lawson, the system that you demonstrated a little while ago, is that able to in essence get a small localized area as well to be alerted versus an entire--how does that work?

MR. LAWSON. Right now our job is to give the signal to the other media and communications carriers and they redistribute. If they can localize it, fine. We can certainly send information that is designed for a geographically targeted region. In the future, because our system is addressable in place, DTV receivers could be individually accessed. Everybody would receive the signal through their antennas, but only certain receivers could decode the data. So eventually, yes, we could geographically target.

MR. UPTON. Now I would like each of you to answer this question, and then we will go to Mr. Wynn for some questions. We have a series of votes so we will have to stop and adjourn for a short time and then come back. Should the National Alert System remain a voluntary system or should we mandate it? I will just go down the panel. Ms. Allen.

MS. ALLEN. It is my belief that it should be mandatory

MR. UPTON. It should be mandatory. Mr. Jackson.

MR. JACKSON. I concur, Mr. Chairman.

MR. UPTON. Mr. Pitts.

MR. PITTS. That is difficult for me, Mr. Chairman, as a former broadcaster because the broadcasters don't like that but I think it is about time that we start mandating some kind of emergency alerts.

MR. UPTON. Mr. Kelly.

MR. KELLY. I agree, mandatory. It is critical.

MR. UPTON. Mr. Guttman-McCabe.

MR. GUTTMAN-MCCABE. I would say it should in essence be voluntary for certain systems. Our system is different. It is not a point to multi-point. It is a point to point. And I just personally believe that our industry will respond in its creative manner if it is not mandated. We have that in Amber Alerts and we have that in Wireless Priority Service.

MR. UPTON. Mr. Lawson.

MR. LAWSON. Our participation in the current EAS is mandatory. The WARN bill would make our participation of the National Alert System mandatory. We support that.

MR. UPTON. Mr. Knapp, I don't know if you can respond.

MR. KNAPP. I am afraid not. We have an open proceeding and it wouldn't be appropriate.

MR. UPTON. I am just giving you some protection.

MR. KNAPP. That is fine. Much appreciated.

MR. UPTON. Mr. Wynn. By the way, for other members that are here, after Mr. Wynn has concluded, we will take a brief adjournment and come back, so Mr. Wynn.

MR. WYNN. Thank you, Mr. Chairman. I think one or more of you mentioned the concept of multi-lingual capacity. Of those who I would call the messengers on the panel, and I mean that with the highest regard, do you have multi-lingual capacity and do you believe that that is appropriate for a system such as this? Any of the messengers? Mr. Pitts.

MR. PITTS. Yes, sir. We do have multi-lingual capacity, and we do think it is appropriate.

MR. WYNN. Anyone else want to volunteer a sentiment? Mr. Lawson.

MR. LAWSON. Public television definitely has it. In fact, even on our multicast television, digital television, we are watching a Spanish language television channel.

MR. WYNN. Anyone else?

MR. GUTTMAN-MCCABE. Congressman, I would just add that we envision the WARN Act coming up with those types of requirements and through the process, and if that is one of the requirements that comes out of the process we will address that, the wireless industry will address that.

MR. WYNN. Thank you. Mr. Knapp, what would be a reasonable length of time to expect the industry to define necessary protocols and performance criteria for specific technologies?

MR. KNAPP. It is always hard to predict but it really shouldn't take that long because I think you have already seen demonstrated some of the technologies that are available today and so it would just be a matter of testing them and nailing down the standards.

MR. WYNN. Are we talking about maybe a year?

MR. KNAPP. I don't know.

MR. WYNN. It is kind of adrift in government.

MR. KNAPP. I can't put a number on it.

MR. WYNN. That is fine. Mr. Guttman-McCabe, there is always a difference between our Government wish list and what technology can deliver. Would one year be enough time, do you think, to resolve those type of issues?

MR. GUTTMAN-MCCABE. In terms of sort of setting down the requirements and then working towards standards, I think we could sit down the requirements within a year, absolutely. And then we would work toward setting standards so that we could integrate it into our networks.

MR. WYNN. I have one final question. A couple of speakers, I believe, you, Mr. Guttman-McCabe, and also Mr. Kelly mentioned liability protection. That is always a highly contentious issue here in the Congress particularly when we try to do good. We are trying to do good here. Would you comment a little more about the liability protection issue?

MR. GUTTMAN-MCCABE. Certainly. Congress saw fit in 1999 to extend liability protection to the E911 service, and I think that model would be appropriate here. Our devices at times when you push send on a signal we work hard to make sure that the overwhelming majority of the calls go through. But I think it was Mr. Kelly that said that we want to make sure that the industries that participate are not subject to frivolous lawsuits. And unfortunately our industry at times tends to be a target of such lawsuits so I think it would be in the interest of the country, it certainly would be in the interest of our industry, to have that type of liability protection as we do in the 911 space.

MR. WYNN. Mr. Kelly, would you care to comment?

MR. KELLY. Yeah, I agree 100 percent with what he said. When you are a wireless service provider a lot of things can happen. You are doing your best to keep the transmitters up, to keep the network up, but if a storm comes through and knocks over a tower you have got limited capability in a short period of time to rectify that, so being sued for

something that would be an act of God or something out of your control is just not going to be conducive to long-term success in this program.

MR. WYNN. Is the current liability protection, does it cover even gross negligence as an absolute waiver of liability?

MR. GUTTMAN-MCCABE. Currently in your version of the Act, there is not liability protection.

MR. WYNN. No, I know. I mean you made reference to, what, the 911 system?

MR. GUTTMAN-MCCABE. Right.

MR. WYNN. Is that an absolute waiver or is that--

MR. GUTTMAN-MCCABE. I don't know if it covers gross negligence, Congressman. We will get back to your office on that.

MR. WYNN. I have no further questions, Mr. Chairman. I relinquish the balance of my time.

MR. UPTON. Okay, well, we will stop. We have three votes on the House floor so we will come back probably around 12:00, 12:05. We will reconvene.

[Recess.]

MR. SHIMKUS. [Presiding] I would like to call the hearing back into session, and thank you for your patience. We do have a lot of time now and based upon members returning, and we are just going to go into their chance to ask their questions. And if I am it, then we can leave. Let me ask a couple questions. Everybody understands the intent of the legislation, and it is based upon as some folks quoted "our ability to make sure that people get informed." I want to ask, because we have a lot of different technologies out here, a lot of different ways to deliver, we wanted to make the legislation technologically neutral. We want to incentivize.

And I come from an area of the country where I represent 30 counties in southern Illinois. I have got a county that has only 5,000 residents. I have a county that doesn't have dial up landline 911. So when people say mandate, mandate, mandate, guess what, you can't mandate to areas that don't even have 911 dial up. They haven't passed the tax. They don't even have the system. So that is why voluntary incentive market-based competitive products, I think do a better job of encouraging full deployment, and that is the intent of what you are doing.

I used to carry three, now I only have two, and the point is the importance of this getting information out to our citizens, our loved ones, is debate on redundancy, multiple systems. Now so I don't miss votes, I carry two. I used to carry three. I used to have the Blackberry before it was composed with the cell phone. I used to have a cell phone. I used to have a Blackberry. I used to have a pager. Now I felt like Batman with

a utility belt. Now through the ability of technology some people would just carry this in hopes that everything works perfectly.

So can anyone talk--and maybe starting with Mr. Knapp, just talk about legislation as a response to concerns of the FCC and moving in a direction that may be focus forced, can you talk about your focus on redundancy?

MR. KNAPP. Yes. Thank you, Congressman. One of the objectives of our proceeding was to foster a more redundant robust system. Today's system just relies--basically it is a branch and tree. If any key link goes out there are sections of the country that may not get service. So among the things that we were looking at are using some other technologies like satellite delivery, the Internet, and so forth to have a more robust way to distribute these emergency alert signals.

MR. UPTON. Does anyone else want to mention or talk about the importance of redundancy?

MR. GUTTMAN-MCCABE. Certainly, Congressman. First of all, I want to thank you for having multiple wireless devices. You are exactly the type of consumer that we love. As I said in my opening statement we very much believe that resiliency and redundancy makes sense. As Julius had mentioned, the Commission is looking at an alert system across multiple platforms, and we wholly endorse that. I think the best way that we view an alert system is sort of in an--I think someone had mentioned earlier dropping a stone into a pond or almost a viral sense in that people will be alerted through different mechanisms whether that be word of mouth or picking up the phone after you have received your alert.

So from our perspective it clearly makes sense to have multiple, different types of devices and then as you had said, Congressman, from the wireless industry's perspective, and as I said in response to the Chairman's question, we believe that in our industry competition will result in the best and most capable product. I know Mr. Kelly mentioned the idea of dropping in a paging chip set and Mr. Pitts has a product that works to alert people, and Mr. Lawson has a transmission vehicle. We are willing to look at and investigate all of those things, but the solution is not simple.

Mr. Kelly's idea of a chip set would require people to go back and look at standards and do standards development because you can't just put a second chip into a phone this big. It would also require, likely require, shielding of the existing antenna so that you don't cause interference within the phone from the phone to itself. It may cause a need for an additional antenna, additional weight, things like that. It is something we would clearly consider. It is also along the lines of inserting the NOAA chip, which is what we looked at. Again, in both

those cases there is an existing infrastructure in place. The question is what makes most sense from government's perspective and what makes most sense from the industry's perspective going forward. We are willing to investigate all of those.

MR. KELLY. I would like to comment on redundancy too, if I could, please. Having two devices, having a cell phone, having a pager we think is a good idea from the standpoint of how the networks operate. If you have a large storm that goes through and knocks out power in a given area or it knocks off transmitters in a given area, your mobile phone might go down because it is communicating with the local transmitter whereas the way paging works is it simulcasts, so we are sending in a large geographic area the same signal to multiple towers, and so a tower can go down very close to you but one 10 or 15 miles away can still be broadcasting it very high powered, generally 3,500 watts ERP. You will get the signal. We found that during Hurricane Katrina. We found that during 9/11.

My written testimony has examples of where that worked. With respect to integrating pagers into mobile phones, I agree there are some technological issues that would have to be overcome. We have met with manufacturers who are willing to take that task on so the capability is there. It is just a question of from a business perspective does it make sense, so redundancy is important. And I guess the last thing I would say on that is when you have situations and they are going good, it is not so important, but you can't always put all your eggs in one basket and have the best probability of success.

If you go to New York and you lose power in a brownout, a lot of communication systems are going to be down. Pagers happen to put transmitters on hospitals. Over 30 percent of most paging companies' base that tap into their emergency power supply so if you are in Manhattan and power goes off in the city a pager is likely to work where a mobile phone may not. So there are just, I think, advantages to having both mobile phones, pagers, and many other technologies because you never know where the point of failure is going to be because you never know the type of problem that you are going to have.

MR. SHIMKUS. Billy.

MR. PITTS. Mr. Chairman, I agree with what Mr. Kelly says and he pointed it out in his remarks that on the Katrina panel we discussed pagers as a good redundant system. In 1975 I put in the group alert system, the auto dialer for calling all the Members as well as what is affectionately known now as the beepers. So you have to look at what is an effective warning, and it was discussed in detail by the Partnership for Public Warning. It was a non-profit group that was in place right after 9/11 through 2005. And the finding is that people tend to mill around

unless they hear the voice of a credible spokesperson sort of telling them you've got to move, you've got to act.

And we decided that the beepers would be, from the cloak room, an actual live voice. And as you now know the Sergeant of Arms has put annunciators in all the offices with a live voice saying get out of the building because in many instances even when I was up here we would be looking at the Blackberry saying did you get this message saying get out of the building? Yeah, I got it too. But when you hear that voice saying get out of the building, there is a plane coming in, you act. So you want to look at what is effective but you do want to have the redundancy that you are talking about.

MR. SHIMKUS. And thanks because I think you are reiterating. One thing that we want to be careful of because there is a lot of different technology is instead of picking one, we want everybody at the table--I think that is the benefit of a working group, so in essence we are moving together. There may be some little friendly competition also, which is good, because you want to be able to advertise the services that you render for the consumers to purchase. And my time has really expired, but I am in the chair and I want to make sure I ask Mr. Jackson and Ms. Allen a question.

Ms. Allen, first of all, in your opening statement the basic question I have do you or do you not support the bill?

MS. ALLEN. Oh, yes, I definitely support the bill.

MR. SHIMKUS. That is really all I wanted to make sure I heard. Mr. Jackson, in your testimony you talked about the importance of notifying--I hope it was your testimony, notifying individuals like elected leaders or people in government positions first before an overall public broadcast of the alert. Can you tell me why you think that would be helpful?

MR. JACKSON. Well, I think it is important, for example, in Prince George's County each of the agencies have an emergency plan and that way we would be able to notify appropriate staff to set things in place before the general public to minimize the chaos. We also have in the county under the leadership of the County Executive what is termed the family plan so each employee of the county government is encouraged to establish a family plan.

So I can tell you that during any mission, particularly a mission during a disaster, the last thing we want to see in a Hurricane Katrina and possibly a Rita is that the officials who are to help those in trouble are worried about their families and so therefore they will concentrate more on that than they will on the mission.

MR. SHIMKUS. Well, you are talking about a short--I mean you are not talking about an extended period of time?

MR. JACKSON. Oh, no, sir, not at all.

MR. SHIMKUS. And I think the importance of that, again that would be the working group. That would be what people would have to discuss. A lot of our experience is September 11 based and a lot of text messaging that we now use is because that was working so we all obviously lived in an environment where everybody was trying to get access to information. People in senior positions had information; regular rank and file, Members like me, we had no information, and I am not complaining about that, but I think the importance is that the folks who have to clear, make sure that the bridges are open that they mobilize early so that when the public is notified that there is not a run in a direction in which you don't want them to run.

And if you are talking about biological, chemical, WMD, and wind direction, you don't want them to run people in the direction of where the wind is blowing. That is the critical aspect of more information if possible, but there are technological limitations.

MR. JACKSON. Well, if I may, for example, I get messages from the Metro Washington COG when there is a catastrophic accident or even a weather warning, we get those almost immediately as soon as they get them and so that allows us to prepare accordingly.

MR. SHIMKUS. I am going to turn the chair over to Mr. Walden who is also a rural member, and thank you for your time and I look forward to working with you.

MR. WALDEN. [Presiding] Good afternoon. My apologies for not being able to be here earlier. We had a Deputy Whip meeting I had to be at. In addition to being a rural member, I am one of two who are actually licensed Ham radio operators, and the only Member who is a licensed broadcast provider. We own and operate five radio stations so I have been involved with the Emergency Alert System over the years and its predecessor, assist in the Emergency Broadcast System and then as a Ham radio operator been involved in that respect. And I understand there hasn't been much discussion yet in terms of these emergency crises, the role of the amateur radio community and how they might be able to weigh in and be of assistance. Can any of you speak to that? Mr. Knapp from the FCC's perspective?

MR. KNAPP. Of course the amateurs have always played a critical role in providing support in emergencies. I don't know that this has been a particular focus in our proceeding because we have been focused on delivering emergency alert messages.

MR. WALDEN. Right. There is some--anybody else on the amateur side? Mr. Pitts?

MR. PITTS. Yes, sir. During our discussion on the Katrina panel, the Ham operators played an important role down there in the coastal States. They were probably the first up and the first organized to get the

message out. And to speak to a discussion that the sheriff was having earlier, he was describing what is called the classical cascading of alerts where you go through your command and control structure and then you get to the public. And as part of the national response plan there is sort of almost a paradox here because when we talk about the EAS, we talk about sort of from the Federal or the State going down, but once there is an incident declared under the emergency support function number two once there is an incident then the telecommunications is controlled from the local up, so we have to make sure that the local authorities like Sheriff Jackson and others are able to make that communication, those necessary communications, as well as the outside communication coming down. And I think we found with the Ham radio operators performed a lot of that initial function at the local level.

MR. WALDEN. Well, my own experience from some of the field days I have heard about and been aware of and I actually participated in one, they also have the equipment availability and the portable generators and the ability to go set up quickly a network, if you will, whether it is to send packet or to do voice transmission. And I would think as you look at these issues when everything else goes sideways and law enforcement is trying to keep people from rioting or whatever they are doing, it is certainly a resource that is out there that can be very useful.

It seemed to me in our post-9/11 briefings what worked and didn't. I think I recall the former FCC Chairman saying they actually asked broadcasters in New York to stop using the EAS because it in effect was scaring people. Is that correct?

MR. KNAPP. I am sorry, Congressman. I don't know the answer to that but I can take it for the record.

MR. WALDEN. That would be interesting to know. It seemed to me--I am just thinking back and a lot was happening in that period, and I guess while the alert process is important it has always seemed to me that as a broadcaster who has been through some local emergency situations, floods and fires and things, that most just went on the air full time and that was far more productive than in many cases a fairly garbled EAS message that is being chained from one station to the next to the next because in these rural areas it can be a long way in between in a broadcast sense from one station to another.

Mr. Knapp, I understand the FCC is looking at asking the wireless industry to utilize cell broadcasts and technology for the dissemination of emergency alerts. Some of the filings that have been made in that preceeding indicate the maximum transmittal number of characters for GSM is 93, and 256 for CDMA. Can emergency alert really be useful with such a limited ability to communicate?

MR. KNAPP. We have a fairly voluminous record, and much of it deals with this issue. And the carriers have said that there are things that can be done initially through things like short messaging service, the SMS service, but as the technology progresses and we move to third generation networks it is going to have more horsepower, and the messages could be much longer.

MR. WALDEN. What kind of a timeline do you think that is?

MR. KNAPP. I think what we are--some of these technologies are being rolled out today and there is still debate in the record as to how quickly that will happen.

MR. WALDEN. Mr. Guttman-McCabe.

MR. GUTTMAN-MCCABE. Congressman, on Tuesday I received an Amber Alert. Sheriff Jackson spoke in his testimony about the wireless Amber Alerts. On Tuesday I received an Amber Alert for a pair of children that they thought was abducted in Virginia. And a little bit north of 100 characters basically on one screen, I was able to see the make, the model, the color, the license plate, the look of the two children, the fact that one was an infant and one was a toddler, that they were both African American, their weight, their size, what the abductor looked like, it was a woman, and all of that was in less than 200 characters. So there is a way to do this, and what we believe is that through the WARN Act if initially Congress or the FCC or FEMA goes down the path of requiring something in the short term the industry could respond to that.

And we very much appreciate the process that is in place through the WARN Act where you would sit down and establish what should be in the message and how does that fit within existing capabilities. But Julius is correct. There will be an evolution and our goal is to make sure that the evolution matches up with what is required from government, but first a key component is figuring out exactly what government wants, what the requirements are.

MR. WALDEN. If you can do all that with 256 characters maybe you can help us in writing some of these laws. Mr. Pitts, congestion is a major issue when it comes to delivering emergency alerts. How does your product abate the concerns about congestion in an emergency?

MR. PITTS. Yes, we use multiple LEC, Local Exchange Carriers, and we essentially are coming from the outside in so you dial a toll free number, you make your message, and then by using multiple LECs as well as we have these mathematical algorithms that essentially can tell what is congested in terms of the central offices or NOCs, and then moves to another exchange, so we are able to essentially understand, that is why we call it an intelligent system, understand what is happening and the message moves to a freer LEC.

On the question of SMS, we deliver SMS as well. Most of our clients don't do it because in the seven bit world you are limited to 160 characters and they feel that is a burden. I do believe many messages could be made and deliver under 160 characters, but I think in their mind they think that they are limited and they just don't want to start down that path.

MR. WALDEN. All right. Mr. Guttman-McCabe, if the wireless industry can transmit Amber Alerts what makes it so much more difficult to transmit emergency alerts?

MR. GUTTMAN-MCCABE. Congressman, I would say it is not much more difficult. From our perspective, what we would like to see is a replication of what is happening in the Amber context. In the Amber context, the National Center for Missing and Exploited Children decided or agreed to be sort of the aggregator for the over 100 entities that can originate an Amber message. They, in turn, worked with CTIA and the carriers and an integrator was chosen, Syniverse in the case of the wireless carriers, who would take the message from the National Center and insert it into all of the carriers' networks through contracts and memorandums of understanding.

And the process was pretty quick and straightforward. The lynchpin, the key element, was the National Center agreeing to be the conduit. As I am sure you are aware, right now we are working with the Federal Communications Commission, with FEMA, with the Administration and the White House executive order, and with Congress, and you throw in NOAA and the National Weather Service, and from our perspective, if we can get a sense of who is going to be the key conduit helping us put together the package, the industry will deliver the message.

If it is in the short term, it has to be SMS. That is the only capability that exists. If it is over a longer term, we would hope, and through the WARN Act there is a process in place, we would hope that the requirements would match up with the evolution of the networks so that you are not requiring literally billions of dollars of upgrades and the changeout of hundreds of millions of handsets. But we are willing to embrace that. We are fully behind the WARN Act. We have been engaged with the Commission and have had a great relationship with Julius and the Chairman's staff, and we want to continue that. We have worked on the pilot project with Mr. Lawson and his group and FEMA. It can be done. Make no bones about it. It can be done. We just need a process in place to tell us what you want delivered, what the requirements are, and then we will work from there.

MR. WALDEN. Okay. I am sure Mr. Jackson may well agree with this but it just seems to me when we have had emergencies whether here on the East Coast, 9/11, or in our own communities with a flood or a fire,

the first thing that happens you lose power or you lose communication, phone service, cell service, whatever, and the more we can build into the system the redundancy for the absolutely unthinkable because right now we do so much based on everything working. We can pull it off.

And even in that environment sometimes when you do a test it doesn't work. Something is lost, some communication link, and it just seems to me for all of us that continuing to move ahead in a way that integrates new technologies gives us new options, new alternatives, so that when something does go wrong and we are all diverted in many different ways we have got backup systems, and that is where--

MS. ALLEN. I would like to comment on redundancy.

MR. WALDEN. Yeah.

MS. ALLEN. Redundancy brought to its lowest common denominator is what happened in Hancock County, Mississippi. We had an amateur radio operator who owned a low power FM radio station and during the height of the storm he was taking batteries out of flooded vehicles to keep the radio on the air using at the time very low power, but continuously operating. And within 10 days after the event, that low power radio station became a higher power radio station and was basically the only communications that the people down there had. And all of the infrastructure was destroyed so they no longer had access to cell phones and Blackberries and televisions and the like.

FEMA handed out several thousand battery-powered radios. So that brought it back to the lowest common denominator of redundancy. Broadcasters are first responders.

MR. WALDEN. Some of us think of that as the highest level of communication.

MS. ALLEN. I agree.

MR. WALDEN. Whether it is a few watts or a lot of watts but in the end that is the way to mass communicate and all these other new technologies are great and useful, but as the Chairman said I had a Blackberry on 9/11 and it worked because of the ability to e-mail, but it didn't work in terms of being able to conduct much phone traffic, and that worked well. I don't have any other questions for you all. Thanks for the good work that you all are doing to try and help America have a better warning system and alert system so our citizens can be safer and our communities safer in these events. We thank you for your testimony and for your hard work, and we look forward to continuing this process forward. With that, the subcommittee is adjourned.

[Whereupon, at 12:40 p.m., the subcommittee was adjourned.]

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