FEDERAL COMMUNICATIONS COMMISSION

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INDEPENDENT PANEL REVIEWING THE IMPACT OF HURRICANE KATRINA ON COMMUNICATIONS NETWORKS

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MONDAY,
JANUARY 30, 2006

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The above-entitled matter convened at 10:00 a.m. in the Commission Meeting Room of the Federal Communications Commission, 445 Twelfth Street, S.W., Washington, D.C., Nancy J. Victory, Chair, presiding.

PANEL MEMBERS PRESENT:

NANCY J. VICTORY, Chair
CARSON AGNEW, Member
MICHAEL ANDERSON, Member
ROBERT G. BAILEY, Member
KEVIN BEARY, Member
GREG BICKET, Member
JOSEPH BOOTH, Member
STEVE DAVIS, Member
ROBERT G. DAWSON, Member
STEPHEN A. DEAN, Member
STEVE DELAHOUSEY, Member
DAVE FLESSAS, Member
MARTIN D. HADFIELD, Member
JIM O. JACOT, Member
TONY KENT, Member
KELLY KIRWAN, Member
JONATHAN D. LINKOUS, Member
ADORA OBI NWEZE, Member
EDUARDO PEÑA, Member
BILLY PITTS, Member
MICHAEL SAUTER, Member
MARION SCOTT, Member
KAY SEARS, Member
EDMUND M. SEXTON, SR., Member
EDWIN D. SMITH, Member
WILLIAM L. SMITH, Member
PATRICK YOES, Member

FCC PERSONNEL PRESENT:

KEVIN J. MARTIN, FCC Chairman
LISA FOWLKES, Designated Federal Officer
JEAN ANN COLLINS, Alternate Designated Federal Officer.

I-N-D-E-X

P-R-O-C-E-E-D-I-N-G-S

(10:16 a.m.)

CHAIRPERSON VICTORY: Why don't we get started. We're missing one of our panelists, who has been affected by the weather this morning flying in, and because of fog was diverted to Baltimore, but I understand that he's on the ground and should be joining us, hopefully, within the next 30 to 45 minutes.

Welcome to the first meeting of the FCC Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks. My name is Nancy Victory and I'm the Chair of this panel. I'd like to specifically welcome FCC Chairman Kevin Martin, who called for the formation of the Katrina panel. Thank you very much for being here today, and thank you also for the opportunity to serve you, the Commission, and the country in this important endeavor.

Chairman Martin, his staff, and the FCC Bureau staffs worked long and hard during and after Hurricane Katrina, on a 24/7 basis, to assist in the restoration efforts.

I'd also like to recognize the efforts of Commissioners Copps and Adelstein, who were committed to aiding in any way, and visited the affected areas

first-hand. They were not able to be here today, but I believe we're going to be getting taped statements from them.

Additionally, I know that the newest FCC Commissioner, Commissioner Tate, is very interested in this issue, as well, and I believe Commissioner Tate will be providing a taped statement, also.

I want to extend a special welcome to my fellow panelists. I know that just about all of you have your hands very full dealing with the aftermath of Hurricane Katrina. We appreciate your agreeing to lend your experience and expertise to this panel, and for traveling here today.

Last but not least, I'd like to introduce Lisa Fowlkes and Jean Ann Collins, who are sitting to my right. These are the designated and alternate designated federal officers for the panel. They are responsible for the meeting today, and they will be assisting the panel throughout its mission.

Hurricane Katrina has been one of the most devastating natural disasters to hit this country. It is significant not only for the level of destruction it caused, but also for the extent of the destruction, over a huge geographic area. And Katrina affected every corner of the communications sector. Just about

every service provider, network operator, or infrastructure on the ground sustained serious damage and/or disruption from the storm. Hurricane Katrina will long be remembered for this devastation.

The hurricane and its aftermath have shown that we must be better prepared for disasters in the future. We must learn lessons from Katrina in order to guard against what might come next. We must assess the strength and weaknesses of the communications sector's preparedness for the storm, identify the impediments and facilitators of rapid service restoration, and evaluate whether adequate emergency communications were available before, during, and after the storm.

That is the important task that Chairman Martin has assigned to this panel, to figure out what went right and what went wrong, and to make recommendations to the Commission so that the next time disaster strikes, the communication sector, including important public safety participants, repeats and augments the successes, but avoids the pitfalls that delayed recovery and hindered critical emergency communications.

I'm pleased to be joined on this panel today by not only a diverse array of private and public communication sector participants, but also

with individuals with firsthand knowledge and expertise of the tremendous impact Hurricane Katrina had on communications infrastructure and emergency communications.

The experience of the individuals around this table will not be the only input in developing the recommendations that Chairman Martin has requested. This panel will aggressively seek information and suggestions from other interested and knowledgeable parties. As I will discuss later this morning, the panel will be providing several opportunities for public input, which I strongly urge interested parties to take advantage of.

Further, this panel will be operated in an open and transparent manner, so that the public can follow the panel's information-gathering process and consideration of recommendations.

Again, broad public input is the best way for this panel to develop the most appropriate recommendations for the Commission. I urge interested parties to participate, and thus help the panel members accomplish the important mission that Chairman Martin has defined for us.

With that, let me introduce FCC Chairmen Kevin Martin to make some opening remarks.

Chairman Martin, thanks again for the opportunity to contribute to this endeavor. You have the floor.

FCC CHAIRMAN MARTIN: Thank you, Nancy, and thank you all for being here this morning, and welcome. And I certainly appreciate, and everyone on the Commission does, you all taking time out of your busy schedules to volunteer to participate in this endeavor and try to help us learn from the tragic experiences last fall, so that we are able to better identify what we can do to make the communications networks both more robust and resilient, more easily capable of being restored, and provide the kind of communications that we will truly be capable of when we take advantage of all that technology has to offer.

I also do want to thank all my colleagues, Commissioner Copps and Commissioner Adelstein, who were supportive in both visiting the region and supportive in the idea of moving forward this panel originally.

Commissioner Tate has been very supportive since she has arrived at the Commission, as well. So while none of them, unfortunately, are here, they are all on travel today, you can rest assured that they are very supportive and I think we will hear from all

of them in a few moments, and I want to make sure that I thank them for their support in this, as well.

I do also want to take time to thank Nancy Victory for her being willing to chair this. We appreciate it very much, and I know that she spent a lot of time both over at NTIA, and even back when she was in private practice, looking at some of the issues as it relates to Homeland Security, and I think we'll all benefit from her knowledge and experience in this area.

This is a somewhat unique endeavor. It's the first time that we're bringing together from all the sectors of the communications industry, both the wireline and wireless, broadcast and cable, satellite and terrestrial service providers, along with the equipment providers, in one forum, to study the impact of a disaster and develop recommendations to improve our response and recovery efforts for the future.

In the past, the Commission has had great success bringing together industry representatives to study network reliability, security and resiliency, and we hope to build upon this success by bringing all of these communications providers together in one comprehensive forum.

This independent panel is unique in

another way. Not only does it bring together leading experts from all sectors of the communications industry, it also brings public safety organizations directly into the heart of the process.

Leading public safety officials will be working side by side with the industry representatives to identify the lessons learned and develop recommendations for improvement.

Because emergency response personnel are on the front lines during a time of crisis, it's very important that the public safety community has an opportunity to provide its unfiltered views and contribute to developing recommendations for improving communications in the future.

I also want to thank the representatives from the NAACP and LULAC for their participation in the panel. As we've learned from recent disasters, community-based input is critical to address issues of emergency preparedness and response, and there's already issues that we've been able to identify, which you can help us try to work on, of making sure that all the representatives in the community both have access to and are alerted to the emergencies when they are coming.

Together, we all hope that these experts

will be able to study the impact of Hurricane Katrina, both on the communications sector and public safety officials; review the sufficiency and effectiveness of the recovery effort; and make recommendations to the Commission on ways to improve disaster preparedness, network reliability and resiliency, and communications among emergency responders.

The awful damage caused by the worst natural disaster in the nation's history underscored the importance of communications networks for response, relief, and recovery efforts. The work of the experts gathered here today should help all of us learn from this terrible experience, so that we will be better prepared for the next crisis.

Because of the importance of this work, we've asked this independent panel to submit a final report to the Commission by June, which I know is a very short timeframe. And I recognize the seriousness of the task and the demands of making that kind of recommendation in such a short timeframe, but we all think that that's really critical for us to then be able to take the next steps that will be necessary from the Commission's standpoint.

So we appreciate your service, we stand certainly ready to assist the panel any way that we

can, and look forward to working with you closely between now and June. Thank you all.

CHAIRPERSON VICTORY: Thank you, Chairman Martin.

I understand that the other commissioners have taped remarks. Can we roll those?

COMMISSIONER COPPS: (Pre-recorded Statement). Good morning. This is one meeting I really wanted to attend, but I'm unable to be with you this morning because of a commitment made last year to represent the Commission in a multi-lateral conference. I wanted to be in Washington to welcome you, to thank you, and to talk about where you're headed.

So first of all, welcome. We're pleased you're here. Thank you for agreeing to serve and for committing to what will no doubt be serious time and energy on this important effort.

As many of you heard me say, nothing trumps public safety and Homeland Security. We need to be ready for the next cataclysm, whether its origin be unbridled nature or murderous terrorists, and I think most of us agree we have a lot of work still to do.

Restoring the Gulf Coast communications

network, all those links torn asunder by the wind and water of Hurricane Katrina, is as challenging a communications mission as this nation has ever confronted. I commend Chairman Martin and so many of our FCC staff for their tireless efforts to aid recovery in the storm's immediate aftermath.

I also salute the companies for the work they did. In the days following the storm, companies that usually compete with one another worked together in a spirit of mutual help. Intermodal competition gave way to intermodal cooperation, and it served the public interest.

Now, everyone on this panel is charged with working together to serve the public interest. That demands a thorough look, perhaps some very difficult calls, digging out the facts and making them known, and letting the chips fall where they may.

You must determine, as a group, what actions are necessary, both short-term and long-term, to upgrade network reliability, build in systems redundancy, and enhance the survivability of our nation's communications systems. What you develop here will be tremendously relevant when we are face-to-face with the next ravages of nature or with additional terrorist attacks. Concrete actions to fix

our communications systems have been a long time coming. Too long.

We saw the results from communications failures on 9/11, over four years ago. We saw them again during the East Coast blackout, and then more recently with the hurricanes.

The plain fact is that we are not as ready as we need to be for the next big natural or manmade disaster, and this time, we dare not fail in our emergency planning efforts.

So we're looking to you. At their best, advisory panels like this one dig with an open mind into tough issues, identify and face up to the mistakes or shortfalls that are discovered, and make real-world and sometimes very tough recommendations to address them.

I expect that when you're through, we will understand, at a minimum, (1) which parts of the wireline and wireless networks failed during the emergency: how long they were down, how many people were affected, and any ripple affects these failures had; (2) whether failsafe and backup systems worked: where and for how long, where they didn't work and why not, and what alternative technologies or systems could contribute in a future emergency; (3) the state

of police, fire, 911, and healthcare communications systems readiness throughout the emergency: what worked, what didn't; and (4) the problems various federal, state, and local responder systems had talking to each other, and what specific actions must be undertaken to help these first responders develop the interoperable networks they need.

No doubt, many other questions need to be asked as you work toward the recommendations you have been asked to produce.

The crux of my message is this: don't shy away from asking the tough questions and hunting down the difficult and perhaps unsettling answers. This cannot be a superficial examination. Go wherever the facts lead. If you ruffle feathers, so be it. You may also be the target of heavy lobbying. Resist any pressures to sweep issues under the carpet. With lives on the line, it is your job on this panel to be tough and diligent to get the answers and make the hard calls.

Your panel's work will not only help the Commission and help industry, it can assist Congress and help our sister federal agencies, state and local governments, first responders, and the entire public safety law enforcement and healthcare provider

communities.

Two final thoughts. Do what you're going to do in an open public process. A closed process can only detract from the credibility that needs to attend your effort.

Second, recognize there is a broad range of voices out there that are not represented on this panel; for example, Americans with disabilities. I urge you to reach out to them and to all those who are not sitting at your table this morning, but whose viewpoints are important for your review, and critical to their future.

There are a lot of stakeholders in New Orleans and all along the Gulf Coast whose lives were permanently and profoundly transformed by Katrina and the other storms. They not only deserve to be heard, they need to be heard, and the extent to which they are heard is surely going to be one touchstone by which your fellow citizens judge the success of your endeavor. You need to be reaching out.

Again, thank you for taking on this tough assignment. You have an incredible amount of work to do in a very short time, and I expect you are anxious to begin. So I'll conclude with my best wishes as you begin your work, and I want each of you to know that

in addition to our Bureau staff, my office and I stand ready to assist you howsoever we can. Thank you all very much.

COMMISSIONER ADELSTEIN: (Pre-recorded statement.) Thank you all so much for your willingness to serve on this blue-ribbon panel. Your convening today represents a crucial step in the effort to move forward in the aftermath of a season of what were really devastating hurricanes.

I know you are in able hands, thanks to Nancy Victory, who so thoughtfully agreed to serve as your Chair. I really wish I could join you today in person, but I'm on travel, so I want to thank the Chairman for convening this group. I think you can play a key role in improving our nation's disaster preparedness, improving our network reliability, and improving communications among first responders.

We really need efforts like this to achieve constant and never-ending improvement, to protect ourselves in the event of future disasters, be they natural or manmade.

I'll never forget the horrifying images I witnessed firsthand when we visited the Gulf Coast shortly after the disasters. The devastation was even worse than I could have ever imagined, and ever since

our FCC meeting that we held in Atlanta last September to the first meeting of this panel today, I'm really impressed with how well the telecommunications industry has responded.

In Atlanta, we heard it from our panelists and we saw it in the eyes of hundreds of communications workers who were laboring around the clock to restore connectivity to the Gulf Coast. I also saw it in the eyes of those who lost their homes, and yet they still came out to work and to help. I saw how critical it is that we all work closely together, including the Commission, in times of crisis.

We all understand how critical telecommunications are, not only for emergency personnel, but just for regular citizens that are desperate to find out what's happening to their families, what's happening to their friends. We need your help to assess what worked well in Katrina's aftermath, and more importantly, how we can improve our preparedness and response.

We did well, but we can do even better. We must do better. We've got to help wireless, wireline, media, satellite, and public safety, all better prepare, respond, and recover from an emergency

or from a disaster. We need to find out what happened. We need to not hesitate from giving the most critical possible analysis that you can.

My trip to the Gulf Coast and my discussions with so many of you afterwards have helped me to understand the lessons that we've learned. But there's much more to learn and a lot more to be done, a lot of hard questions that yet have to be asked, about issues such as redundancy, planning, and reliability and interoperability.

So I applaud all of you involved with this panel for helping us to tackle these issues. I commend the Chairman, my friend Kevin Martin, and the FCC staff, for their response to the hurricanes. Disasters like these demonstrate how important it is that we all work together in times of crisis.

Thank you again for all of your effort and for all the hard work ahead.

COMMISSIONER TATE: (Pre-recorded Statement.) Welcome to the FCC this morning. I really wish that I could be with you today, but I'm glad to be able to extend this personal greeting to you as you begin this important job, not only for the FCC, but for our country.

When the hurricanes hit the Gulf Coast, I

was back home in Tennessee, but like many of you, it took days to track down close friends and my former state colleagues. Through them, I was really able to hear first-hand of the devastation, devastation that many of you all faced first-hand.

Former Commissioner Michael Callahan put it this way: "I just don't think you understand, Debbie. There are three towns that have been wiped off the face of the earth down here." His emotional statement has stayed with me, and that's why your work here today is so very crucial.

Because the FCC oversees major infrastructures that are critical to the nation's ability to respond, whether to natural disasters or other emergencies, we must continue to learn from these events and prepare for tomorrow.

Just a note in praise of the FCC staff: when contacted by a carrier to assist following Hurricane Katrina, I gladly called the FCC offices on a Friday night, thinking I would merely be leaving a voicemail, only to discover that the FCC staff was working around the clock to take immediate action to assist in any way possible to restore communications for the public safety operations, for the media, for business, hospitals, and all type of relief efforts,

and especially for individuals to locate their loved ones.

I send my heartfelt thanks to you, Nancy, for your leadership, and to each of you, many of whom I'm worked with in Tennessee, and look forward to receiving your recommendations, which I hope will include specifically those who have special needs.

Have a very good and productive meeting, and again, many thanks.

CHAIRPERSON VICTORY: I'd like to thank the Chairman and the Commissioners for their remarks. I'd like to turn next to describing the panel and the panel structure.

Since this is the first meeting of the panel, I think it's important that we all understand what our mission is, how the panel is going to tackle that mission, and what the tentative timeframe is for doing so.

With regard to the panel mission, as laid out in the panel's charter, and this is in the panel member packages on the tables here in the Commission Meeting Room. It's also posted on the panel's website.

FCC Chairman Martin has given this panel a very defined mission: we are to study the impact of

Hurricane Katrina on all sectors of the telecommunications and media industries, including public safety communications; we are to review the sufficiency and effectiveness of the recovery effort with respect to this infrastructure; and we are to make recommendations to the Federal Communications Commission regarding ways to improve disaster preparedness, network reliability, and communications among first responders such as police, firefighters, and emergency medical personnel.

I want to emphasize that this is a very defined inquiry that is specific to Hurricane Katrina and its aftermath. I want to stress this both to the panel and to interested members of the public who may be making written and oral submissions to the panel. However, based upon what the panel learns from studying the lessons of Hurricane Katrina, we will be making recommendations to enable better preparedness and faster and smoother recovery for future incidents.

Now, importantly, these recommendations are due to the Commission no later than June 15 of this year, so we have got five months. This is going to be a very intensive effort for those of you around the table.

I want to stress that this is a panel

formed under and operated pursuant to the Federal Advisory Committee Act. As such, the panel will conduct itself in an open and transparent manner. Specifically, all of the meetings of the panel will be public, and prior public notice of these meetings will be provided.

Information submitted for the panel's consideration will be made publicly available, and draft reports and recommendations for the panel's consideration will also be made publicly available.

Now as I emphasized in my opening remarks, the current experiences and knowledge of the panel members around this table will not constitute the sum total of the information to be considered in completing the panel's mission. Hopefully, it will comprise only a small portion of the information reviewed and considered in developing recommendations to the Commission.

As already indicated on the panel's website, the panel is receptive to and encourages written submissions from interested members of the public. I strongly encourage all interested parties to submit written materials. Full participation of interested parties is the best way for the panel to become fully informed so it can make the most

appropriate recommendations to the Commission.

As indicated on the website, written statements from the public should be submitted by email to Lisa Fowlkes, the designated federal officer, at lisa.fowlkes@fcc.gov, or to Jean Ann Collins, the alternate designated federal officer, at jeanann.collins@fcc.gov.

Submitted written statements will generally be posted on the panel's website, made available in the FCC's reference room, and distributed to the panel members for consideration. These written statements may be submitted any time, but of course, earlier in the process is always much more helpful to the panel members.

And I want to underscore that the written statements should be consistent with the panel's mission. If they are not germane to the panel's mission, they may not be considered.

The panel also plans to provide an opportunity for interested parties to make oral presentations to the panel. These oral presentations are to occur at the panel's next meeting, which is to be scheduled for early March, and we will be announcing the specific dates and location as soon as possible. I think it's the hope of the panel that we

can actually hold this meeting closer to the affected area and outside of Washington, D.C. I anticipate this will probably be a two-day meeting.

Given the finite time available for the meeting and the panel's desire to maximize coverage of the relevant issues and diversity of viewpoint, we will be requiring that entities interested in making an oral presentation submit a request to do so in advance of the meeting, and this request should also be submitted in writing to Lisa Fowlkes or Jean Ann Collins by email.

Now these requests should include the name of the person who would give the oral presentation and the name of the company or organization that person is representing, a description of the nature of the presentation, and, if available, a bio of the presenter. Requests to deliver an oral submission must be received by the designated federal officer no later than February 17 in order to be considered. This process for requesting an opportunity to submit an oral presentation will be posted on the panel's website.

I want to emphasize that the panel desires to hear from a variety of viewpoints on these issues. To the extent that there is an issue of particular

interest to the panel, the panel may solicit persons with expertise on the issue to provide presentations at our next meeting.

We will notify those selected to provide presentations and provide additional information regarding the length of the presentations as promptly as possible after receiving your request. And to ensure that the panel receives as many presentations as possible during our next meeting, we're going to be asking that presenters limit their presentations to five to ten minutes each. And also, potential presenters should be advised that the panel members may ask questions.

As far as the panel's advisory committee structures, like most federal advisory committees, this panel will have informal working groups made up of small numbers of panel members to help it effectively review and process the necessary information within the time required.

I want to emphasize, these working groups are not decision-making bodies. Rather, they will be compiling and sorting information in particular issue areas for presentation to the full panel.

The panel plans to have three informal working groups. The first, Informal Working Group 1,

will be focused on infrastructure resiliency. This panel will focus on such issues as how and why certain portions of the communications network failed; which portions of the communications network continued to work and withstood the hurricane and why; how communications technology can be made less vulnerable to failing; and what steps can be taken pre-event to strengthen the communications infrastructure.

I'm pleased to announce that Marion Scott of CenturyTel has agreed to serve as the chair of this panel, and Steve Dean, the Fire Chief of Mobile, has agreed to serve as vice-chair.

Informal Working Group 2 is going to focus on recovery coordination and procedures. This panel will focus on such issues as ways to increase the speed with which communications can be restored post-event; whether communications technology could have been used more effectively during the recovery period, including issues related to consumer education and post-event deployment of communications technology; the intra-industry procedures that communications providers use to coordinate recovery efforts; the industry government procedures that private communications firms and federal, state, and local governments use to coordinate recovery efforts; ways

that private industry can obtain faster and more efficient access to impacted areas; the security and protection procedures utilized by private communications industry members when they first send their first responders to impacted areas; and how well emergency communications services, including telecommunication service priority, government emergency telecommunications service, and wireless priority access performed during Katrina and review the extent to which emergency responders use those services.

I'm pleased to announce that Steve Davis of Clear Channel Radio has agreed to serve as the chair of this panel, and Joey Booth, Deputy Superintendent of Louisiana State Police, has agreed to serve as vice-chair.

The final informal working group, Working Group 3, will focus on emergency communications. This panel will consider such issues as identifying the means for insuring or enabling rapid deployment of interoperable communications in the wake of an event like Hurricane Katrina that can be implemented in the short term; identify any coordination that needs to occur among public safety entities to facilitate implementation of such a system in the wake of a

disaster; review Hurricane Katrina's impact on the Gulf Coast regional 911 and E-911 system; review the impact on public safety answering points and the procedures used to re-route emergency calls; examine whether and how the communications network could have provided greater 911 connectivity for private citizens; review the adequacy of emergency communications to the public before, during, and after the hurricane; and examine the best ways to alert and inform the public about emergencies in the future.

And I'm pleased to announce that Steve Delahousey of American Medical Response has agreed to serve as chair of this panel, and Jim Jacot of Cingular has agreed to serve as vice-chair.

These informal working groups will be critical to the success of the panel, and I want to thank the panel members who have agreed to serve as chair or vice-chair. I'm going to ask that the six of you meet with me at noon, when we take our break, to meet a little bit on the procedures for conducting how the working groups are going to work. I believe some members from the FCC's General Counsel's Office will join us for that brief meeting.

As far as the tentative timeframe goes, today is January 30, 2006. In order to be in a

position to make recommendations to the Commission by or before June 15, this panel should strive to adhere to the following schedule.

In early February, the working groups will begin meeting to identify the facts to be gathered, the issues to be explored, the experts to talk to with respect to working group issue areas.

In early March, we will have the second meeting of the panel, to gather information from interested parties and experts through oral testimony. Late March and early April, the working groups will continue to meet, probably telephonically, to organize facts regarding what happened during Hurricane Katrina and its aftermath, identify areas for recommendations, and begin formulating draft recommendations for the panel's consideration.

In late April, I hope we will have the third meeting of the panel, where the working groups will present draft findings, potential areas for recommendations, and any draft recommendations thus far developed for discussion and input by the full panel.

Throughout May, the working groups will continue to meet to revise and augment findings and to develop draft recommendations, and in early June, we

will have our fourth and hopefully last meeting of the panel, where the panel will consider, discuss, and adopt the draft recommendations. That will allow us, by or before June 15, to forward our recommendations to the Federal Communications Commission.

Any questions at this point from the panel on the schedule, and I will make sure that is distributed to all the panel members for your information.

With that, let me introduce the other members of the panel. I believe each will make an opening statement, providing their perspective on the impact of Hurricane Katrina on communications networks, and identifying some of the issues for the panel to follow up on.

Let me remind the panelists that they should limit their remarks to more than ten minutes, and we're going to go alphabetically this way, so I'll be introducing you before each of your remarks.

Let me start with Carson Agnew, Executive Vice President of Mobile Satellite Ventures, L.P.

MR. AGNEW: Good morning, Madam Chairman and esteemed colleagues. I have submitted some written statement, and I am going to read a part of it today, but not the whole thing.

As Nancy said, I'm Carson Agnew. I'm an executive vice president at Mobile Satellite Ventures. We're a mobile satellite provider that was directly participating in the relief efforts after Katrina. I'd like to say, to begin, what an honor it is to participate in this panel, and how much I applaud Chairman and the others for convening the group. I hope our output helps to move forward the public policy debate on how to improve communications in times of national emergencies.

To understand the impact of Hurricane Katrina on the satellite industry, you need to understand that most of our infrastructure is invisible to the user. The satellites are thousands of kilometers away in space. The gateway route stations that connect with the public or private networks are located in various places around the country. Usually, a satellite can communicate with more than one gateway, and a gateway communicates with more than one satellite.

As a result, if you were to ask what happened to our infrastructure as a result of Hurricane Katrina, the short answer would be nothing. The satellites kept right on communicating with the gateways. The communications, as far as I know, all

of the voice, data, and two-way radio carried on without destruction.

Of course, we had much higher traffic volumes than normal. In our case, daily call attempts, call volumes, packet data usage, were up about four-fold on a daily basis. Other operators, such as Global Star, Iridium, and Inmarsat, also reported big jumps in traffic, and as far I know, all of networks had nominal performance, nevertheless.

As an aside, that's exactly what you want. You don't want your operational guy running down the hall with his hair on fire, telling you the network is damaged. You want it to work.

The picture was not as rosy where users were located. Land-mobile satellite terminals are, by nature, portable. Some are hand-held phones, other are briefcase-sized units that can carry voice or can send data. Sometimes, the antennas mount around the vehicle, and the unit draws its power from the vehicle's electrical system.

At other times, the terminals operate from batteries. However, they're not as easy to use as an ordinary telephone, and some users had trouble using the equipment, especially at first. Some people were out of practice. Others were unfamiliar with the

equipment's use. We actually saw help desk calls peak as the storm made landfall, much more than we did our own traffic. We handled that as we had in the past with other hurricanes, because we had extra help desk staff on, beginning about two days before the storm made landfall.

Also, many satellite terminals today are only used when other networks fail completely, and are stored until needed. Sometimes, the equipment meant for backup wasn't properly stored. For example, batteries weren't fully charged. Additional batteries, or a means of re-charging them, wasn't available.

In spite of this, the usage data I mentioned earlier shows that satellites were heavily used during and after landfall. A review of our own records shows that the use extended beyond emergency services, as usually defined.

Not only were first responders involved, they were the largest user. We also had high usage from local utilities, local governments, the media. Oil and gas industry was heavily involved.

In terms of issues that we encountered, I think the biggest one involved equipment. Unlike some other hurricanes, the infrastructure was down for an

extended period and therefore, many agencies ordered additional equipment after the emergency started.

I don't have a complete count, but it's clear that collectively, the mobile-satellite industry alone supplied tens of thousands of terminals to users in the affected area, and two weeks later, with Hurricane Rita.

Our biggest problem was moving equipment when the modes of transportation we normally use are unavailable. As businesses, we use commercial carriers. Quite apart from being unable to operate in the area affected by the hurricane, many were shut down for the Labor Day holiday. Several companies, including ours, had to clear equipment through customs, also not an easy thing to do during a holiday.

It took ingenuity and perseverance to make sure that equipment got to those who needed it in spite of all this. As we did after 9/11, when state, local, or federal government officials asked for satellite phones, we just shipped them without waiting for the paperwork, and we followed up with free service to critical state and first responders.

I think I speak for everyone in the industry when I say how proud I am of the people who

worked the long hours and found creative ways to enable that all our customers to receive reliable communication service. Nevertheless, as we all know, Hurricane Katrina was an extraordinary catastrophe and as such, it revealed problems that remain masked unless dire emergencies.

We can and we must learn from this unintended experiment, and I look forward to working with the panel on that. Thank you.

CHAIRPERSON VICTORY: We're going to turn next to Michael Anderson, the chairman of PART-15.org.

MR. ANDERSON: Good morning. Good morning, Mr. Chairman and distinguished members of the Commission, along with the fellow members of the panels and the guests. My name's Michael Anderson, and I serve as the chair of PART-15.org, which is a vendor and technology neutral wireless internet service providers' organization. There's approximately 8,000 of us across the U.S. right now providing broadband, wirelessly, through the license-exempt rules of the FCC, mostly in rural America. We are downtowns, but most of it's in the rural areas.

PART-15 first began our relief efforts after receiving information and distress calls from fellow WISPs down in the affected areas. We also were

invited to attend a conference call that the FCC had, I think, the day after the hurricane hit, and it was agreed during the conference call -- many industry providers, Intel, Microsoft, Motorola, Cisco, all the major players were on that conference call, to my knowledge.

And it was agreed that PART-15, an industry organization, neutral to all technologies and manufacturers and services, funnel a lot of the industry's relief efforts to the FCC. So PART-15 graciously accepted that offer of assistance. I'm not going to read this whole thing. It's going to be made available on the FCC's website, I believe.

Some of the key points that I'd like to verbally express out of the whole report here is within 48 hours of being asked to help by the FCC, we established an ad-hoc emergency communication system that worked really well. We had two websites going at the same time. One was for volunteers, and we had thousands of people volunteering -- communications technicians, RF engineers, things of that nature -- all volunteering their services and/or equipment.

We had manufacturers, Vonage, Cisco, Motorola, lots of equipment coming in that was readily available and was soon thereafter shipped to the

south. I'm based in Chicago, so I say the south.

Volunteers, equipment, generators, and everything self-supporting that the guys needed were sent down there with a plan to assist the first responders and emergency personnel with any type of communications that they needed.

Our services that we can offer are voice, video, data, the whole realm of communications. We can do this from as far away more than 100 miles. For example, one of the back-hall links that we used to provide broadband to downtown New Orleans area was brought in all the way from Baton Rouge, and it was sufficient enough bandwidth to provide 1,000 voice calls all at the same time.

So we have some good capabilities that we produced. The technologies of the WISPs include WiMAX, mesh networking, high-speed long-range, point-to-point and point-to-multipoint links, Wi-Fi -- Vonage donated 500 Wi-Fi phones, so once we got the wireless back up and running in downtown New Orleans, which was only a day or two after the hurricane hit, we were able to provide 500 police officers, emergency responders, medical personnel, with Wi-Fi phones that they could use to interconnect to the internet or make phone calls amongst themselves through the voice-over-

IP technologies.

Presently, our services from the volunteer forces from the industry, are providing all types of communications -- voice, video, and data, to over 400 different locations, from Rayville, Louisiana to Leyman (phonetic) -- I'm probably saying that wrong -- Lyman (phonetic) -- Biloxi, Pass Christian, Mississippi, New Orleans, and all along the cost there. We're providing the communications support to municipalities, emergency responders such as police, fire, medical personnel, shelters -- regardless of size.

Most of our shelters actually were ad hoc popup shelters, people fleeing the downtown New Orleans area and the southern coast area, heading north, just could tired and couldn't travel any farther, so they stopped along the way at local churches or things like that, and they became mini tent cities that weren't really on anybody's radar.

FEMA didn't know they existed, because they just popped up that night, and things of that nature. But the local WISPs in the area were able to contact us and we provided the systems to those guys. Most of this happened all within 24 to 72 hours upon arrival of our volunteers.

Some of the things that I'm hoping that this panel will address is some of the focus should be, hopefully, on non-traditional means of communications. I'm probably sitting here as the only non-traditional form of communications. Everybody else is satellite, the hardwire guys, and other means. Those are the traditional ways, but the non-traditional methods have proven to be very useful in situations like this.

Most of our issues that we had in providing the volunteer assistance that we had was -- most of it was just a basic education and lack of understanding of who we were and what we could do to help. Not being on anybody's radar and being non-traditional, most people didn't really realize the help we could provide them and therefore, didn't ask for it or wasn't sure of its true capabilities.

Finally, I'd just like to thank the Commission and, specifically, some of the personnel at the FCC. I remember calling the FCC during the first couple days -- 9:00 on a Saturday night, and the phones were being answered, and they were in a meeting running to FEMA and ARC's headquarters here in Washington and needed information from me or something like that, so they worked 24/7, and I really applaud

everything that they did. It was a lot. Thank you.

CHAIRPERSON VICTORY: Thank you. We turn next to Gil Bailey, Telecommunications Manager of Harrison County Emergency Communications Commission.

MR. BAILEY: Thank you, Madame Chairman. First of all, I'd like to thank you for the opportunity to serve on this distinguished panel and to represent the public safety answering points along the Mississippi Gulf Coast, not only through our Commission, but also through national NENA.

During the early morning hours of August 29, 2005, Hurricane Katrina, the worst natural disaster to ever occur in the history of our country, was announcing its arrival on the Mississippi Gulf Coast.

Katrina would bring hours and hours of 135, 150 mile an hour winds, and tidal surges of over 35 feet to our communities. This combination punch was about to wreak havoc on many of the 911, telephone, cellular, and public safety radio systems that served our citizens in Hancock, Harrison, and Jackson Counties in South Mississippi.

The impact in Hancock County, which borders our sister state of Louisiana, was catastrophic. The 911 PSAPs, located at the Hancock

County Sheriff's Department and Waveland Police Department, were totally flooded, destroying their 911, telephone, and public safety radio systems.

The Bay St. Louis Police Department, while not flooded, received extensive structural damage, once again destroying 911, telephone, and public safety radio systems. The Hancock County Emergency Operations Center, which would normally serve as a backup for these affected PSAPs, was also flooded and totally unusable.

In addition to destroying the two PSAPs, the flooding also rendered useless numerous switches belonging to Bell South, the local telco provider, in addition to cellular and public safety radio tower sites.

This resulted in a very limited short-distance point-to-point ability of radio communications, no interoperability, no 911, no telephone service, and very limited cellular service, which was supplemented by a single satellite phone that was salvaged from the UOC.

This situation continued until September 1, when members of the Florida Department of Law Enforcement Telecommunications Team arrived with a communications trailer and began establishing

temporary radio sites, and a military communications unit arrived to provide telephone connectivity via military satellite link.

It was not until September 19 that 911 and wireline telephone service was re-established at a temporary consolidated public safety answering point.

On the eastern end of the Gulf Coast, in Jackson County, which borders or sister state of Alabama, the situation was almost as bad. Once again, this tremendous tidal surge took its toll as it flooded the Jackson County Sheriff's Department PSAP. The 800-megahertz public safety radio site adjacent to the emergency operations center was also flooded.

As in Hancock County, the 911 infrastructure took a tremendous hit and one by one, the PSAPs at Moss Point, Pascagoula, Gautier, and Ocean Springs went offline. The 911 service would return to normal operation after a period of one week, following the repair of infrastructure and the re-routing of services to the affected PSAPs and while the response by the 911 service provider was immediate, unfortunately, the frequent boring through of the fiber optic cables by utility crews replacing broken utility poles -- at the very least, was extremely frustrating, and resulted in no Sailor

service for a period of over two days.

The 800-megahertz public safety trunk radio system utilized by numerous local public safety agencies in Jackson County, reverted to a fail-safe mode as the microwave connectivity was lost between the various sites.

This fail-safe mode resulted in the system losing its trunking ability and causing all users to revert to a single repeater, resulting in a party line.

The loss of the radio system's ability to properly trunk resulted in an extremely congested single frequency until the afternoon of August 30, when technicians were able to return the system to a trucking mode.

While faring slightly better than its neighbors to the east and west, Harrison County was not spared the wrath of Katrina. Due to building structural concerns and proximity of the Gulf of Mexico, two PSAPs relocated to alternate locations prior to the storm's arrival.

The City of Biloxi PSAP was relocated to the Biloxi Emergency Operations Center, where backup 911 administrative telephone lines and desktop radio consoles had previously been activated.

The City of Gulfport PSAP was also relocated inland, due to its proximity to the Gulf of Mexico. Once again, backup 911 administrative telephone lines and desktop radio consoles were activated at this alternate location. The primary PSAPs located at the Harrison County Sheriff's Department and Long Beach Police Department remained operational in their normal facilities.

The city of Pass Christian, Mississippi, located in the western section of Harrison County, was not as fortunate as the other PSAPs. The Pass Christian PSAP was evacuated just prior to Katrina's arrival, and the 911 and administrative phone lines were rerouted to a designated backup PSAP. The same PSAP also assumed control of all police and fire dispatch operations for the City of Pass Christian.

The resulting tidal surge totally destroyed the Pass Christian PSAP, along with all radio, 911, and telephone equipment. Even though their PSAP had been totally destroyed, a temporary dispatch center, with desktop radio consoles, cellular phones, and countywide interoperability was re-established by noon on August 30.

When 911 service was disrupted by damage to the local telephone infrastructure, the PSAPs

continued to receive both wireline and cellular 911 calls throughout the storm.

Sadly, this good fortune soon passed. As the batteries and the telephone switches began to run down, the switches started failing. It was not until generators were placed at these switches that 911 and telephone service began to come back online to many of the PSAPs.

The Macon EDAX 800 megahertz trunk radio system, operated by the Harrison County Emergency Communications Commission, which was utilized by all local public safety first responders in Harrison County, performed extremely well before, during, and after the storm. The temporary loss of one site due to a microwave dish being blown out of alignment, was resolved by noon on August 30, returning the system to full operational capacity in less than 25 hours.

Upon the arrival of the Florida Department of Law Enforcement Communications Response Team and an analysis of the current state of communications capabilities in the three coastal counties, it was determined that the Harrison County Radio System, which served as the initial backbone for the coordination of the Department Communications Resources within Harrison, Hancock, and Jackson

County.

The large capacity and single center operability capabilities of the Harrison County system allowed over 800 additional public safety users to be placed on the system during the two weeks following the arrival of Katrina. These additional users were provided seamless, direct communications with all public safety first responders operating within Harrison County, including local, state, and federal agencies.

Even with over 3,850 radios operating on the system, it easily handled over 4,000,000 push-to-talk requests during the month of September. This is four times the normal activity of the system that it sees on a monthly basis.

Even though the wireline, cellular, and radio providers had prepared for the storm, the sheer size of the devastation was overwhelming to everyone. The total destruction of a telephone switch is not easily resolved. It impacts landline, cellular, radio, and even internet services.

The following list is just a few suggestions of items that hopefully, we can review, improve on, and assist us in resolving the many issues that all of us face.

One of the most important is to identify all the critical communication networks and provide the generator and backup support they need prior to the arrival of the storm. Pre-approval of diversified routing of services, particularly for 911. The current FCC restriction preventing pre-configuring the re-routing of 911 data across LATAs, or local access transport areas, at times resulted in delays in restoring some of the 911 services. We did get an immediate approval, but we did go through the approval process.

The lack of knowledge of membership by many agencies to the telephone services priority, government emergency communications service, and wireless priority access, hampered them in receiving adequate responses by some of the providers.

The establishment of a comprehensive local, state, and federal emergency communications response plan. This will allow the standardization of an emergency response communication system nationwide.

The establishment and equipping by the telecommunications industry, Office of Homeland Security, FEMA, of these communications response teams composed of public safety, 911, telephone, cellular, and internet specialists to respond with equipment to

disaster sites and assist the affected areas.

The ability to more easily utilize the communications resources of our military in the civilian environment.

And finally, to utilize the resources of NENA, APCO, the telephone providers, wireless providers, state emergency management, and FEMA to develop a comprehensive communications preparedness package for all of our local communities.

Madame Chairman, once again I'm honored to have been selected to serve on this panel, and I look forward to working with yourself and all the members of this panel to come to a successful recommendation. Thank you.

CHAIRPERSON VICTORY: Let me turn next to Kevin Beary, the Sheriff of Orange County, Florida.

MR. BEARY: Thank you, Madame Chairman. Thank you for the opportunity to serve on this panel, also.

First of all, I'd like to recognize the fact that I was honored to be selected by the Major Counties Sheriffs' Association, and I'm also the task force leader for the Florida Sheriffs, and we deployed over 700 individuals to Mississippi, and that's where I met Gil, and we were part of that deployment with

the Florida Department of Law Enforcement.

Folks, you might say that Florida has learned some lessons, because we've had eight hurricanes hit our state in 15 months. So I can tell you that people plan for a disaster, but ladies and gentlemen, Katrina was a catastrophe.

In Florida, we dealt with wind-related damage. In Katrina, total communication equipment rooms were shut down because they were flooded, which means that we need to take a loot at how we build our infrastructure. In Florida, we need to make sure it's not near the coast, as does Mississippi, Alabama, Louisiana, Texas, and in the mid-Atlantic States and the like.

We also might need to take a look at regional systems, in other words, get our egos out of the closet, folks, and we all come together, cites and counties, and establish regional command posts that are inland to take care of the problem, and then everybody would be properly trained in the backup system.

And ladies and gentlemen, I can tell you that before you have interoperability in a situation like we saw in Mississippi, you have to have operability. So this is where some of our

communications partners can come into play.

We need cellular systems on wheels. For lack of a better term, we called it COWS -- cellular system on wheels. We also need public safety system on wheels, and you bring in the whole system: towers, telephones, public communication radios, and folks if I could, I'm going to be pretty blunt, because that's just who I am, it can't be seven days later. It needs to be immediate.

So you're going to have to -- if we do something like this, it needs to be done by a government agency, or somebody that says they're going to get it done, and then they need to get it done. And like you said, Gil, with those cell systems on wheels, as well as the public safety communications on wheels, let's get the licensing done prior to, so we don't have to go through that hassle, and let's make sure it's a truly mobile environment.

I will tell you that planning is critical in a communications response both statewide and nationwide, and one way you can -- especially the FCC can overlook this -- if you are going to be funding federal grants to local and state governments, then they need to play by the requirements, and maybe some of the things that this Commission is going to be

talking about.

Some of the problems that over 700 Florida deputies encountered -- as I said before, this was more of an infrastructure issue than an interoperability issue because infrastructure was totally destroyed. There was no cell service for approximately seven days in the western part of the state, and I was in Hancock County.

So you had limited service up in your county, Gil, but it's pretty hard to be in Hancock County, deployed, and then you have to drive up to Interstate 10 so you can get a little cell service and then come back.

Satellite phones were hit and miss. The first four days after landfall, the radio range was less than three miles, and once the Florida communications equipment arrived, it increased to about five miles.

As I said, some recommendations: portable communication systems; both telephone and public safety radio; kind of in a regional cache for immediate deployment. I've already made a mention that police and fire communications cannot be built near the Gulf or an ocean, it must be built inland. Take a look at regional capabilities, regional assets

for immediate deployment, and I've talked to President Ted Sexton from the National Sheriffs' Association, who will speak later.

Folks, I believe pre-storm, even in the communications and law enforcement field, you have to have pre-trained people from the National Sheriffs' Association, major city police chiefs and major county sheriffs, as well as the other disciplines, trained in a command post environment, and they need to be at the Department of Homeland Security Command Post, so that you can deploy the necessary elements to go in there and help relieve people in a timely, orderly fashion, because some of the things that hindered communications was the fact that we had people pre-deploying, by themselves, without any authorization, and then they were taking the gasoline, the aviation fuel, and things like that, which hampered the recovery operation.

So having these specially trained law enforcement command post managers would help facilitate this, not only pre-storm, but after the storm. And one other thing we found, once communications was established, people need to use it. They need to inform the command post what is going on.

We worked with a body recovery unit and had to set up a temporary morgue. We gave five radios to this particular unit, and they chose not to tell us anything. So I think another thing that needs to be done is, folks, we need to put, again, egos aside.

It doesn't matter if you're federal, state, or local government, you all better have patience and you all better work as a team, because that's the only way it's going to get done. And with that, again, it's an honor to be here. Thank you.

CHAIRPERSON VICTORY: Next is Greg Bicket, Vice President and Regional Manager of Cox Communications.

MR. BICKET: Good morning. It's a pleasure to be here. On behalf of Cox Communications and the cable industry in the Gulf South, we'd like to express appreciation to the Chairman and Commissioners, as well as Commission staff and our panel Chair, for the opportunity to participate and work with you all over the coming months.

My name is Greg Bicket and I'm responsible for Cox Communications operations in the New Orleans metropolitan area. Cox is a facilities-based provider of cable television, high-speed internet, and both residential and commercial telephone services.

We provide service to many entities critical to public safety, and also provide carrier services to a dozen interexchange and wireless providers in the New Orleans area.

In terms of the impact of Hurricane Katrina, more than 1,000,000 Cox passings were affected in the Katrina and Rita storms. Service to 500,000 Cox customers was interrupted briefly or for days. Redundant fiber backbone routings were damaged in multiple locations. Services to 99 percent of habitable homes occurred in 12 weeks.

30 percent of Cox's New Orleans market must be rebuilt, including reconstruction for commercial carriers. We enjoyed real partnership with Bell South and Entergy in the New Orleans disaster, not so some of the plant-clearing contractors and the municipal debris removal contractors. In 11 days, we had received more man-made damage than the storm had caused.

We have rebuilt much of our network and in the earliest days after the storm, turned to our first responder group, our red team, if you will, who evacuated to Baton Rouge prior to the storm in order to sustain network capability and business continuity.

Four of the six retail locations that we

have in the New Orleans area were heavily damaged and closed. We continued to pay our people through the storm, and we issued market-wide credits in September, only resuming billing when customers were restored.

We provided 17,400 hotel nights and 11,000 meals to Cox employees who had no alternatives in terms of grocery store accessibility or restaurants. Of 825 employees, all but 153 have returned to Cox Communications, and we are back providing our services throughout the habitable part of our city.

The company internally raised $1,300,000 in disaster relief for 652 Cox employees in the Gulf South area, so we stepped up for our own, if you will.

I think more than anything else, the lessons that we learned are that there are paradigms that need to be overcome. How we face issues like this and how we repair networks afterwards needs some new thinking.

Certainly, we need federal designation of essential service providers. We think that's crucial. We need to establish emergency radio frequencies set aside for those first responder teams amongst the essential services providers. We need to maintain lists and photo IDs of those first responders in public inspection files so that these folks can be

verified and so that law enforcement and other public safety folks have instant recognition of those people who have a genuine need to access network.

Many of the delays that Cox experienced in restoring its network were unnecessary and, frankly, further complicated the recovery of the disaster area. We needed instant day-after sort of access to our network, we needed to make sure that we had fuel for our generators, and we found ourselves having to go to Washington to appeal to powers that be to get those needed resources.

We certainly hope the FCC will take the lead in working with other disaster recovery agencies to establish and maintain a list of essential telecom providers. That spectrum that we all are aware is being reclaimed should be at least in small part dedicated to these early responder groups, and give each other access and communications capacity to one another.

We discovered some significant resiliencies of our dual-sonnet hybrid fiber cable network. Much of our network came on as soon as commercial power was restored. We discovered weaknesses, as well. All of our emergency communications alternatives failed in sequence. Our

DMS-500 switch was isolated, permitting only intra-city calls. We had a ten-day delay in reaching our critical mid-city CO that had a couple of feet of water in it, and also some significant fiber routing.

The process that we've gone through turned on some assumptions, and some of those were wrong. We have a very thorough disaster recovery and business continuity plan that anticipated the survival of at least one communications medium. We certainly overestimated our ability to access, physically, our network following the disaster.

We overestimated the coordination and cooperation of local officials, military and law enforcement, and we anticipated at least some access to generator fuel and unfettered movement by these early responder red-team members within the market.

We believe that in preparing for the future, what worked is a very careful, thoughtfully wrought disaster recovery plan. We've certainly gotten a little more practice with it than we'd hoped, but the good news is the plan works well and stood up well in the face of Hurricane Katrina.

We believe that Cox, along with other providers, needs to coordinate with those other providers, these red-team first responder groups, so

that cooperation and collaboration amongst those groups can be optimized.

And frankly, the cooperation that we enjoyed from sister Cox systems around the country create a great benefit, as well. We've had hundreds of other Cox employees, from systems from San Diego to New England, come in and help us bring things back up, but our plan is to refine what we learned in Katrina to update and optimize our plan.

We look forward to the opportunity to work with each of you in making sure that Cox is a partner in the response to future emergencies and perhaps can model some of those behaviors for other companies.

Again, we thank you for being here and we hope to be able to contribute.

CHAIRPERSON VICTORY: Thank you. Let me next introduce Lieutenant Colonel Joseph Booth, the Deputy Superintendent of the Louisiana State Police.

LT. COL. BOOTH: Thank you, Madame Chair, and let me start off like everyone else did by first of all congratulating the FCC for your foresight and your leadership in this very important undertaking, and I'm very anxious to get started and get to the important work of this committee.

I also want to thank many of the

representatives here at the table. Some of you, personally, were involved in the recovery efforts in Louisiana, and others represent both public and private entities which substantially contributed to that recovery, which is ongoing, but we have made substantial progress, and I want to thank you for that, as well.

I have a handout here that I gave a copy of to each of you that I'm going to loosely follow, and I'll just use it to speak from.

It seems to me that already, we're drawing to some considerable consensus on not only what happened, but what needs to be done, and so I really look forward to a very productive series of meeting with this panel.

Let me first give you an overview of what kind of communication system that was in use in Louisiana in particular with the state agencies and some of our locals, what the status of that was, how it fared, and then the steps that we took not only to restore that, but to augment its capacity with other systems, then finally, I'll close with a couple comments about some possible recommendations and solutions that we tried -- innovations on the go that worked to our benefit.

First of all the state is using a very old 800-trunked analog system, which I believe was the first state-wide system installed in the United States and therefore, is the oldest and was built to specifications that were acceptable in the early 80s and plus, it was built as a state system. It was never intended, in its initial design, to support local traffic.

It was built for mobile police car, mobile unit, coverage, and of course, our needs have changed. It is also voice only. We did not even contemplate in the early 80s substantial data transfers like we are now, much less imaging, and so we bought a system that suited our needs, our foreseeable needs at the time, but of course now, some 20 years later, they are woefully short, and so our system is also currently at the end of its service life.

We already have been informed by the vendor that they are not going to support it very much longer, and so we were already in the throes of moving into the 700-megahertz range, into a state-wide network, that would support not only all law enforcement, but support at least a backbone connectivity for all the state's emergency response community using the broadest definition of that.

And so one of the things that plagued us was, I suppose, the same thing that plagues many systems in the United States, especially in this age, is inadequate frequency allocation, again based on our lack of foreseeability of what the needs would be 20 years later, and because also, the capacity is limited in a number of considerations, because for one thing, the technology has limited us to the number of towers that this system will support, and also, again, not having the frequencies, expansion of the system was not possible. Even though some computers, we did not have the frequencies to use.

And so we suffered from a variety of damage in the storm. We did not have any towers in the state system which fell. We did have towers that were rendered impaired or even unusable, not from the winds so much, although we did have some wind damage to the antennas and some equipment, but this was an evolving disaster.

The winds came and we fared fairly well. The system did not go down. We had some impaired operation and like Mississippi, in some areas we went to fail-safe mode and were operating inside the zone quite well, but the sites were not trunking with the rest of the state.

However, when the flood waters came, that gave us another problem. The initial onset of the storm, of course, did bring in some tide surge, which damaged equipment rooms in the far south areas that we had. But also, when the flooding began, we lost the support. The trunk system relies on some connectivity. Ours is primarily based on telephone, T1 connectivity, and we started losing all the T1 connectivity in those towers, and so we lost our trunking capability, which further aggravated the lack of capacity that we had.

At the same time, local systems were going down, and we were trying to move them onto the state-wide network, further aggravating the capacity issue, as well. Then we lost electricity for a variety of reasons, some of it, again, the service providers themselves were flooded and unable to get electricity to us, and then in some cases, when generators began to fail, we were unable to get to the site to power the generators back up, and so it was an evolving type of disaster, involving consequences that cascaded as the days went on.

As a result also of losing the T1s, the telephone connectivity in that area, 911 systems began to fail, and they were moved over to the State Police,

and our State Police Headquarters in Baton Rouge, at our EOC, began receiving a large majority of all the 911 traffic in that area.

In fact, we took, in a short period of time, over 21,000 calls at State Police, and had to come up with a way to do this, because we had not previously been a 911 center. We were not used to taking that kind of traffic, and so we did use a Homeland Security Program, Homeland Security Information Network to transition those calls, and I'll speak more about that later on.

Also, we were getting text messages, as people were trapped and themselves had no means of communication, they found themselves able to send text messages. However, I'm not aware of any 911-type of operation or capability where you can send a text message to a central public service location and get an adequate response.

So all of us, even at the senior command level, were getting personal 911 text messages from friends, and friends of friends and friends of friends of friends, who were requesting various rescues and supplies and status, and so it became very difficult for us, but we did adapt. We were able to put up an ad hoc system to refer these calls to for action, and

we did respond to them.

Also, I will say that we did get a fair number of text messages -- requests for rescues and other reports -- that were apparently and obviously inaccurate, bogus even, that did have some affect in our operations.

So but anyway, as our accessibility did improve, we used -- where the roads were flooded, we used boats or helicopters to get to the sites to try to work on them, and we did bring portable communications networks like cell on wheels and other type of capabilities, to augment that capability.

And so the 800 system, we borrowed repeaters and frequencies from other agencies, other parts of the state. We moved equipment down into the New Orleans area, because what was going on was the same thing that was referenced earlier. Thousands of responders were pouring into the area trying to help, and were getting on the communications systems, or we were networking them in, and so we had many more users, ten times the normal number of users in the area.

Not only that, they were all using the state-wide system, which was never designed to support that volume of local traffic.

So we were overwhelmed. There were busy signals, and the system was overwhelmed for the longest time. And again picking up on what a couple of you have already said, interoperability assumes operability as its foundation, and we suffered from, in many cases, impaired operability. Our system was impaired by all the factors that I just mentioned to you, and plus many local systems were completely failed, allowing and providing no interoperability, but for some of the low-capacity gateway type of devices that we had in service already.

We had a large area outage of services, as you know. Our ability to respond effectively is really at this small area outage. In other words, if a tornado came in and took out a tower and one or two sites and lost electricity over a somewhat smaller area, we could respond very quickly, very effectively.

We also had a capability of re-engineering the way communications is moved around in the system, but where we had an entire region of the state devastated, those options were beyond our means and were not feasible solutions.

So we did respond quickly. We were able to restore some limited communications, and in large part, we were able to be effective because of our

partners in the private sector who responded quite well and quite fast to help us restore.

We installed satellite dishes, microwave links, restored down T1 circuits, primarily using satellite for our data, microwave, for voice traffic, and we were able to implement and install a number of other gateway and other interoperability solutions, as well.

I speak later on in my presentation about the effective relationship we have with some of our government partners, which ended being a huge part of our success and capability. We also have some portable tower capability.

One thing that occurred was that our National Guard is the ESF responsibility -- has the responsibility for communications, but asked us to assist, especially in the restoration of public service -- of public safety communications, so we began working with FEMA and FEMA asked us to help them design an estimate that would support local responder traffic in the 700-megahertz range, because 800 was not a solution. There were no frequencies, there was not enough equipment, and so FEMA did contract with Motorola to install a $15,900,000 700-megahertz voice system in the affected area.

And referring back to the first page that I showed you that was a state system in the affected area, which was 12 tower sites, later on in the back of this presentation, you'll see a map showing the 700 installation, where we not only took those 12 and added 700-megahertz capabilities, but we added six sites, and the very important thing for you to remember is we did not build six towers. That was not possible, certainly in that timeframe.

Our intention has been for the last two years, in augmenting our current system, and remains now, is to use infrastructure partnered with those who are holding current infrastructure and trying to network it into a single system, or at least offer some overriding network that offers connectivity, especially in the time of emergency.

And now, I want to talk also about some of our federal partners, who were very helpful, not only FCC, but in particular, the Department of Homeland Security and the Department of Defense.

The Department of Homeland Security, Louisiana just happened to be one of the eight states that was involved in a rollout of the new Homeland Security Information Network, and we took our 911 calls and moved those over to the HSIN, and were able

to distribute back to local agencies and others like the United States Coast Guard, others who were heavily involved in rescue operations, as well as the many out-of-jurisdiction or out-of-state responders who were coming in, and so we were able to move that information over to a common platform.

In some cases, we had to hand-deliver the data, but we were able to get everyone there on a common set of operating parameters. And the calls were so numerous, at one point we quit dispatching to addresses because before a boat or a craft would get to the address, it would be full of rescuees that they picked up en route, so we started deploying by zone, and we used GIS mapping and others to the plot where we're getting phone call from -- where we could deploy our largest effective concentration of assets in that rescue effort, and we also deployed our communication to support those responders in that effort, as well.

Traditional, I mean very good support from Nextel, MCI, AT&T, and I didn't meant to leave anybody out, because certainly, everyone made a substantial contribution, but just bringing capability to us, portable satellite trailers, Sailor trailers to augment our capacity to communicate and, in fact, we were able to send one satellite-based truck down with,

I think, 24 lines attached to it to one of the jurisdictions that was very heavily impacted during Katrina, and got some feedback that not only was it a tremendous help to him in responding and delivering the essential services, but one thing that is often overlooked is that the responders' homes also were destroyed during Katrina, and the many who were out there responding on behalf of others when some of them didn't even know where their own families were, and themselves had lost everything. And I know that's true for many in the private sector, as well.

But one thing that was very helpful was that these satellite com trailers allowed responders to come in once a day and call their families and hear that everything was okay, and it was a tremendous morale booster and kept many people on the job, engaged at a very critical time in this response, and so --

We did use satellite, as well. We used satellite portable units, handheld for some responders are very unpopular with the users. However, we did effectively deploy satellite fixed installations as a redundancy, and where other telephone services were down, we were able to use satellite and, of course, VOIP telephones were very helpful and very successful,

as well.

We did have some mobile capability that we deployed. The Department of Homeland Security -- Not only the Department of Homeland Security, but the Department of Defense through their Northcom, Northern Command, and through one of the prime contractors, Ravada Pacific, came in and helped us restore some downed areas, putting satellite dishes and microwave transmitters on our sites to reconnect them to the public service telephone network, to restore the trunking capacity, but also bringing in Sailor technology, portable Sailor technology that was stand-alone systems with a system that not only had its only backhaul, it had a satellite dish or a microwave link that connected the cellular telephone to the regular telephone network.

It came with hundreds of telephone devices the users were able to use, and these portable cell sites were networkable. They could be strung out over a period of some distance, and created quite a large operating area.

And so these were very effective. They were rapidly deployed. In fact, in one instance where we had the need for a tower to go in support of emergency response personnel, we were able to get

access to a rooftop in the New Orleans area, but it was completely surrounded by water, and we airlifted a portable tower site and equipment room to the top of the building and, in fact, that is one of the dots on this last map today, that is still operating on top of the Pan Am Building.

But anyway, we did use a lot of temporary installations. Some of those, we have turned them into fixed sites, and we were able to install on tower sites that were already there, and we want to continue to do that.

And of course, FEMA did fund directly to Motorola a $15,900,000 purchase order to put in a 700-megahertz system, and then bought $5,000,000 worth of user units for St. Bernard, Plaquemines, and Orleans Parish for the emergency responders.

And you'll see the map on the last page there, that shows where the 18 tower sites are. Not all these are at 100 percent operation. Those like in the Baton Rouge, North Lake area were the last ones to go up, because that was not where the immediate need was, and of course, again, FEMA's desire here was for a regional network.

What happened, of course, is that responders were coming in from other jurisdictions and

unable to talk in the affected area with the emergency responders who were resident there.

I do want to say that I hope we are able to come up with some effective recommendations regarding the use and implementation or full integration of text messaging into our very important work.

I also recommend that we consider some way to have bandwidth set-asides. One of the things that was so helpful for use in the Department of Defense, for instance, their ACTD Program, the Advanced Concept Technology Demonstration Program. We already had a relationship with them and with Northcom, and already had some mechanisms and processes worked out where DoD could allocate or set aside bandwidth for its connectivity to emergency responders, especially in a terrorist event, where the situation awareness for DoD was so important from the ground.

But these relationships were very effective. They worked for a disaster, as well, and their Military Assistance to Civilian Authorities Program.

And so I would say that this is a program that probably needs to grow some legs for the entire emergency response community.

Also, the capability to restore rapidly with some emergency bridging or in capacity augmentation to local systems, and there needs to be some standard there that regardless of what local community they roll into, the same technology works regardless of the type of system.

Also, service providers were very helpful in Louisiana, and one thing that was most effective with us in integrating their services in their very helpful efforts, was to bring them into our EOC. Our Public Service Commission was very effective in providing a point of contact with them, but actually helping them take part in the planning of where essential services were going to be concentrated as the restoration built out, and also to make sure that we were in those areas operating, as well, to provide them a level of security and access that they would need.

Also, a closer partnership, again, with the private sector -- and the public and private sector on the use of commercial infrastructure. Also using the considerable infrastructure that is out there to and Sailor, it is time for us to take a look at integrating and figuring out how we can use the Sailor network to fully augment or more fully augment

public safety communications in a time of disaster, especially portable mechanisms.

And again, I think bandwidth set-asides for use of public safety users is going to be a very important part of that, with some pre-established contracts, where I don't have to worry about who's going to pay for this service when a disaster is looming at me and I have people that need rescuing.

We need to know that there is dedicated, robust, assured, secured communications available for the emergency responder community, and so finally, we recommend a network approach where like the Sheriff said, we need more regional application where we design not to be interoperability within a community, but interoperable within a wide area, as a large area like the City of New Orleans area was devastated, that responders from other parts of the state and other states can come in and have some standardization of communication where connectivity is made more easy because there is some overriding standard and backbone network that allows, based on connectivity, rapidly.

That concludes my remarks, and thank you very much.

CHAIRPERSON VICTORY: We turn next to Steve Davis, the Senior Vice President of Engineering

for Clear Channel Radio.

MR. DAVIS: Thank you, Nancy. I appreciate the opportunity to appear before this panel, and thank you, Kevin Martin, for allowing me to participate, as well.

Hello, my name is Steve Davis. I'm Senior Vice President of Engineering for Clear Channel Radio. In that capacity, I had the challenge of directing Clear Channel's preparation for and response to Hurricane Katrina.

Hurricane Katrina had an impact on Clear Channel's radio operations in a number of our radio markets besides New Orleans. Damage to our infrastructure included damage to, and in some cases forced abandonment of, studio facilities; downed towers; loss of electrical power; loss of transmitting facilities; and loss of satellite reception capability.

Clear Channel's long experience in the broadcast industry has enabled us to amass a considerable stockpile of resources that proved helpful in helping our stations and our fellow broadcasters to stay on the air in all the communities we serve.

With hurricanes, unlike some other

disasters, such as earthquakes or terrorist strikes, there is some advance warning. We took advantage of that lead-time to hold conference calls with our radio market in the potential path of the storm.

We set up an email list, a phone chain, and distributed our hurricane preparation checklist, discussed evacuation plans, contingency and emergency operation, communication methods during any loss of normal services, availability of corporate resources, and I want to mention the -- Sheriff Beary's idea of COWs. I think we have something similar in mind, and we might call it BOWs, which I would call Broadcast Operations on Wheels.

We have stage transmitters, portable generators, portable towers, even, that can be erected, and we have those sorts of things outside of the area, and we will bring those into an area where there is going to be a disaster or where it looks like a disaster might be approaching.

We staged all of those resources, and also volunteer engineers from outside the area to help our local engineers and broadcasters to be close to, but out of the path of, the approaching storm.

In Hattiesburg, Mississippi, hurricane winds downed a 1,000-foot broadcast tower, from which

two of our stations broadcasts. Because Clear Channel owns multiple stations in that radio market, we were able to continue to provide vital local news and information via our other stations in the area.

When a microwave tower at our Hattiesburg studios also collapsed during the height of the storm, putting that studio out of commission, we relayed news and information from a radio station from a radio station we owned in the nearby Jackson, Mississippi radio market.

One of our regional engineering managers was seen on site helping our local engineering team to manage the recovery effort and within 15 hours, the microwave tower was restored, and we resumed local programming with 24/7 news and information, originating in Laurel/Hattiesburg.

We think that having regional engineering managers with deep experience and technical expertise strategically located throughout the country is one key to our ability to respond rapidly and decisively in these sorts of emergencies.

Construction of a new 1,000-foot broadcast tower also began promptly. In the meantime, our engineering team found a spare antenna at another Clear Channel station and mounted that on our

temporary structure, so the two stations which lost their tower could once again serve the public. That was a good thing, because to this day, construction on that new tower still continues.

Long-term power outages were widespread in the path of Katrina. Not only were generators a necessity, but ensuring a steady stream of fuel was also essential, as I've heard form some of my colleagues already today. Thankfully, Clear Channel also has an outdoor advertising, also known as a billboard, division.

This division has heavy trucks and drivers with commercial driver's licenses and hazardous materials permits. We maintain diesel fuel stockpiles for emergencies at various strategic locations, and our outdoor division drivers were able to transport this fuel to our generators so we could continue to provide service, information, and hope to our listeners in the communities that we serve.

Our outdoor division also provided huge vinyl sheets that could be used as tarps and roof coverings, and trucked ice, water, and supplies to our markets in Biloxi. Portions of the roof were ripped off our studio building there. Many of our employees had lost their homes in the storm. They were living

at the studios.

Using these vinyl sheets, we were able to make the facility habitable until real repairs could be made. We also provided these sheets to employees and citizens who needed them for their homes. We had permanent in place to power most of our Biloxi facilities, including those studios.

In New Orleans, the damage was the most serious and widespread. On Sunday morning, the Governor ordered the evacuation of the city. We weren't sure whether our news and information would need to originate from our facilities in Mobile or, perhaps, Houston, Texas, Shreveport, or somewhere else.

As it turned out, our studios in Baton Rouge, only 50 miles from New Orleans, were spared. So as the storm blew through, we made the field-expedient decision to broadcast and serve the people of New Orleans from our facility in Baton Rouge.

As radio broadcasters abandoned their New Orleans facilities, Clear Channel hastily constructed a network facility within our Baton Rouge building and invited all area broadcasters to join our local New Orleans staff, and utilize those facilities to provide news and information to all listeners within the New

Orleans area, via their signals and ours.

Thus was the United Broadcasters of New Orleans born. Clear Channel and Intercom, represented by Marty, on our panel here today, lost a shared transmitting facility from which three of our FM stations broadcast, because of high water. To continue to broadcast, we installed temporary transmitters at a site owned by the American Tower Company.

That site became something of a nexus for New Orleans broadcasting. It was already the broadcast transmitter home to a number of government agencies, including the U.S. Coast Guard, FBI, IRS, and the DEA. Sprint, Cingular, and Nextel also use this facility. Three full-power television stations, a number of low-power television stations, and six FM radio stations, two of which are Clear Channel stations, transmit from this facility.

Clearly, it was essential to the citizens of New Orleans and the surrounding area that this facility continue to operate. Fortunately, this was a very hardened site, with a large generator and a high-capacity fuel tank. However, even the large tank could not support operation of all these services indefinitely, so Clear Channel's outdoor division

provided a continuous convoy of fuel trucks to this site.

Lieutenant Colonel Booth, as he remarked, also needed fuel for communications. This is one area where I support his idea of a networked approach. If we had known of the need by the Louisiana State Police for fuel, Clear Channel would have happily provided fuel with our trucks to wherever it was needed, as it will to any other agencies in need on this panel or outside the panel.

Clear Channel was able to bring those supplies in to the tower site using our chainsaws and heavy equipment, including cranes, that our outdoor division does have ready to be called into action.

Clear Channel is not just a large corporation, it's thousands of people doing what they do best: serving the people, whether it's entertaining, informing, or just talking with you. And when the need arises, handing you a case of water, a bag of ice, and maybe a tarp.

Mr. Bicket at Cox mentioned that they were able to raise a lot of money for the employees who were impacted by the storm, and we are no exception to that. We certainly were impacted by the storm and had a lot of employees who had lost homes and lost their

very -- the cars, and everything else that they owned.

Clear Channel's employees raised over $270,000 for our own employees and of course, Clear Channel as a company, through our various radio stations, raised $65,000,000 to give to the general public in need, in the impacted areas.

Here's where we owe a huge thank you to Kevin Martin and his team with the FCC, including especially Peter Doyle, Chief of the Audio Division. Our fuel supply lines, stretching all the way from Orlando to New Orleans, rivaled that of a major military operation. Peter and his team were able to help us to secure access to a FEMA fuel depot in Baton Rouge, shortening our supply line from hundreds to just tens of miles.

Peter and I were on cellular phone communication throughout this tragedy. Because of our hands-on management of this triage effort and our direct contact with Peter Doyle and the FCC around the clock, we were able to keep the FCC fully apprised in almost real time as stations went off the air and returned to the air, and whenever stations were operating with temporary or auxiliary facilities, or carrying simulcast programming.

We relied on satellite phones and two-way

radios that we brought in from out of market to communicate with our local and visiting reporters in the field, engineers leading the restoration efforts, and our trucking teams hauling supplies and fuel into the impacted area.

Some issues that we believe this panel should focus on include granting broadcasters first responder status with regard to restoration of cell phone and other vital services so that we can gather and disseminate information to the citizens.

Again, as some of the panelists have already remarked, we also received text messages from listeners or other calls that they couldn't get through to 911 or couldn't make known.

Our radio waves became sort of a public address system to the people in New Orleans, and we would go online and announce these things, and even first responders, if they had a radio on, could listen and known where the trouble was and where the impacted areas were.

As broadcasters, since it is our duty to serve in the public interest, convenience, and necessity, we believe we would like to be involved in the loop of communications so we can truly offer that service as we are intended to do.

Direct access to FEMA officials and fuel supplies is another thing that we would ask for, so that we can continue to provide our services in the public interest.

We're also looking at a credentialing scheme, so that perhaps we can actually gain access to the area. Marty and I did some creative things to get access and to develop our own credentials, and we got some help with that from the FCC. However, there might be a way that we can work with the National Guard and other federal agencies so that the broadcasters who are actually trying to restore service and spread information can be differentiated from mere looters or others who might have an interest in visiting the site without a real purpose.

We had also asked for a training program to assist state and local authorities and emergency operation centers in properly utilizing and operating EAS equipment to send out vital early warnings. Although not as important in the case of Katrina, this is very important for disasters such as earthquakes, terrorist attacks, chemical spills, where there is little or no advance warning.

We support the network approach. We want broadcasters to be a part of it. And thank you for

making a part of it in today's panel. I appreciate the time.

CHAIRPERSON VICTORY: One more opening statement in before we take a break, so Robert Dawson, President and CEO, SouthernLINC Wireless.

MR. DAWSON: No pressure there.

Well, I'll add my applause to the efforts of the FCC, the Chairman, the Commissioners, and Nancy. Thank you for the opportunity to be here.

SouthernLINC Wireless is a commercial wireless provider that operates in the states of Alabama, Georgia, the panhandle of Florida, the southeast 23 counties of Mississippi. We are a wholly owned subsidiary of Southern Company, which is the holding company for Alabama Power, Georgia Power, Savannah Electric, and Mississippi Power Company. I'll focus most of my remarks on Mississippi Power. They operate on the coast, and we do, too.

Because we survived the storm and came back quickly where we had damage, we were the primary means for the restoration of electric service along the coast and in Mississippi, as well as in Alabama and the panhandle of Florida, Gulf Power. Sometimes we were the only means, and we brought in over 11,000 people on the electric side to work in that area, so

Mississippi Power has 1,200 people. We went up to 12,000, and we were the primary means for their communications.

We also supplied phones to the Mississippi National Guard, the U.S. Coast Guard, Mississippi Emergency Management, and other government agencies and public service entities. Some of the people in the room are customers of mine, and I appreciate them.

The high level, I think you can look to SouthernLINC's success being attributed to the original design and construction and the ongoing maintenance of the system; the pre-planning -- the storms. We withstood and dealt with 15 main storms since we were commercial in 1996, and in hurricane season 1995, before we were commercial, Aaron and Opal came through Pensacola, Florida, and we were there to help Gulf Power during that timeline, so we have a long history of that.

We have a lot of extensive lessons learned out of Ivan. I know we're focusing on Katrina, but Ivan devastated Gulf Power Company. We took those lessons learned and applied them to the next storm.

If you haven't been to the Mississippi coast, you've only seen it on TV, you cannot appreciate the extensive damage there. I didn't until

I got there the Friday after the hurricane, and it's beyond description. I can't find words to do it. A small TV set will never do it.

Mississippi Power had 195,000 customers before the storm. They lost all of those customers, but they were able, with our support and the support of lots of people, to get the electricity back to all the people who could take it and along the coast, a lot of homes and businesses were gone within 12 days from landfall.

As Southern Company CEO, David Radcliff recently explained to a Senate Committee on Homeland Security and Government Affairs, Southern Company starts taking action long before disaster strikes. For instance, Mississippi Power alone, it invested $7,000,000 in certain equipment and logistical support in the two weeks before Katrina made landfall, and I will tell you that SouthernLINC's made from that same DNA. We have the same owner.

And there's a circle of life there. For communications, you need power; and to get power restored, you need communications. So we were designed, originally, to meet the ongoing needs of the electric utilities' day-to-day operations over what's now 128,000 square miles for SouthernLINC, to be there

to restore power after hurricanes, tornados, ice, squirrels, snakes, whatever takes it out -- and a lot of things can.

If you're like me, when the power goes out, you walk from one room to the other and the first thing you do is reach for the switch when you go in, because you always expect the power to be there. Wireless is the same way with people today, and I learned from a power guy -- been doing this for ten years -- but it takes a lot of wires to run a wireless company.

We have ongoing work with Bell South over the circuits to get to our towers. We did that before Ivan, after Ivan, and we've got a meeting coming up here in February that I'm looking forward to as we try to refine the process of how we get their people in to restore communications and how we can aid them in restoring power to their sites, which are critical.

Our people helped a lot of folks, let people, their loved ones, know that they were alive -- maybe not well, but alive, and surviving. One of the things that hurt me most in looking at the storm was Mississippi Power Company story didn't get out, and just like many of you talked about your people, the people of Mississippi Power who had lost homes were

there to get the power on, the Southern Company folks make you proud to be part of a company like that.

A lot of what we're going to talk about is going to fly in the face of all the commercials that we see on TV about free minutes, free phones, and free this and free that. This wireless stuff has never been free. The things that need to make it more robust and resilient are going to be things like SouthernLINC has already done, that's put generators at the sites and to make sure that the towers are strong enough, with wind-loadings, ice-loadings, and things like that.

We work hard to have redundancy, both geographically and other ways to have diversity of feeds into our sites and back to our switches.

We did have outages. A lot of that had to do with landlines. We worked around that; we put in on a microwave shots. Bell came in as fast as they could. There probably needs to be more cooperation and coordination between FEMA and what they call a lock-down, and what that does to prevent people from coming into an area that need to be there to work with things.

Things that we planned for: standby generators worked. Switches to automatically throw

over to the generators didn't. What differentiated us from other things that I saw, at least reported in the Press, is we had people there on the ground doing things immediately after the storm. Now, we don't let our people go out into the winds, below 40 miles an hour. We're strong on the whole safety issue, and we have a target zero. Every job, every day, safely.

So we're not encouraging anybody to do things unsafe. In fact, Mississippi's looking at, even though we have had a history of success, what do you do in the first 48 hours if nothing's working?

We design things for our system based on Camille, which was the high-water mark in the lives of many people along on the coast. They talked about where they were when Camille hit, what's happened since. We had two sites that we lost because of flooding, and they were built on piers, eight feet above the ground. Katrina put seven feet of water into the buildings.

So we cannot just stop and think Katrina's probably going to be the worst. My bet is something worse, which I hope never happens, could come along. I hope we don't try to figure out what will be fail-safe in the way that nothing breaks, because you won't be able to afford it, and you will not be able to plan

for everything that nature can throw us.

One of the things we were able to do for our folks was when I call people that I knew that I'd worked with at Mississippi Power during the time I was there, I learned that the 228 area code didn't work. We added 800 numbers to our phones remotely for our customers, and called and told them that they had numbers. This let them call out and have their loved ones from other places call in and also let the emergency workers communicate with people.

We also saw the increase in traffic. If you measure the first three weeks before the storm compared to the last three weeks right after the storm, we saw a three-fold increase. The first thing you see is queuing and blocking. We had people there to put in more than 100 base radios. We took care of that and we got rid of queuing and blocking quickly.

It comes down to people, and we're going to hear a lot of stories about the people. You've got to have plans, and you've got to have people who are smart enough to react and have the capability to do that and to fill in power to do it.

I'd also give credit to Motorola, who developed the technology, iDEN, which has talk-pass for frequency, which made it economical for us to

begin to offer that as a commercial service, as well as just to the operating companies.

Preparation is key, but you've got to work to plan; you've got to have people who know how to operate under the plan. If you don't have that, forget it.

I would note that in 1996, the Public Safety Wireless Advisory Committee, in a report to the FCC, evaluated the wireless communications needs of federal, state, and local public safety agencies through the year 2010. Among its recommendations, the committee encouraged the use of commercial services, provided that the essential requirements of coverage, priority access, system restoration, security, and reliability are met.

SouthernLINC's experience makes it clear, to me, that an appropriate public-private partnership built around a commercial system like ours can provide economically viable and readily achievable solutions to the current communications needs for vital public safety emergency management and critical infrastructure first responders, and can practically adapt to meet those needs as they evolve in the future.

It may not be possible to do that all over

the country. I know it can happen in the southeast, and I would hope that any action that the FCC or this panel would take would encourage such opportunities.

Again, I think you, Nancy, and the FCC for the opportunity to be here, and I look forward to working with you all.

CHAIRPERSON VICTORY: At this point, we're going to take a break for lunch and meet back here at 1:30. Believe it or not, we are on schedule, even though we started a bit late, so that's great.

I appreciate everybody's remarks so far, and I look forward to hearing from the other panelists this afternoon.

We will begin promptly at 1:30. Those of you looking for lunchtime options, there are some cafes available at the courtyard level of the FCC building. There are restrooms just down the hall, and I'm assuming, Lisa, that the security badges will allow them to exit?

Okay, just take your nametags -- or is there a security badge as well? Just the nametags, and if you take the elevator to the courtyard level, it's CY in the elevator, and go out the door there by security, and you will see there are a couple of options for lunch that are close by, or you are free

to leave the building, just be back by 1:30.

Thanks very much, and again, if you are going to be a chair or a vice-chair of one of the working groups, if we could just meet for a couple of minutes here, that would be great.

(Whereupon, the above-entitled matter went off the record at 12:08 a.m. and resumed 1:31 p.m.)

CHAIRPERSON VICTORY: Why don't we get started. It's 1:30, and I know some of you have planes to catch tonight, so I want to make sure we finish on time or ahead of time.

Let's continue on with our introduction of panel members and their opening statements. I believe we're up to Steve Dean, Fire Chief of the city of Mobile, Alabama.

MR. DEAN: Thank you, Nancy. First of all, I thank you for the opportunity to serve on the committee. It's truly an honor, and I'm here representing the International Association of Fire Chiefs, and particularly the metro section, which are the Metropolitan Chiefs.

Being from Mobile, I feel like I'm probably the luckiest fire chief in the country over the last two years. We've dodged five major storms and just been brushed by them, with Ivan, Arlene,

Dennis, Katrina, and Rita. We got very little, if anything, from Rita, but the others, a shift one degree either way could have really been devastating to my area.

Being on the fringe, we were very lucky. The south part of the county that I live in was not as lucky, even though it hasn't received the press that a lot of the other areas have, the Dolphin Island and Bayou La Batre areas of south Mobile County looks like Mississippi Gulf Coast. But certainly since sitting in the center of the northern Gulf Coast, we're right in the middle of what we call Hurricane Alley, s this affects us.

The ability to communicate after a storm in our area is essential to the provision of services to the citizens, and also to coordinate with other public safety agencies as they come in, and that's your lifeblood to get to get to the citizens and for them to get to us.

You can all of the equipment in the world, and you can have all the manpower and all of the will to help them, but if you can't get that phone call in or you can't get that message out to the troops, then all's for naught, and that's our reason for being. That's our lifeblood.

A couple of the things that we would love to see in the public area that's, I believe, pretty well a standard in private industry, is generator power on all of our sites. We could really benefit from that, and that needs to be multi-fuel capable.

Facilities, we feel, we have been very fortunate in that our natural gas supply has been unaffected on any of our storms, since even Camille. We've had plenty of natural gas, but that can be affected, but diesel, as well as other sources of fuel, would be nice to have that capability on these power plants -- and then to have some mechanism to ensure a solid supply of fuel into the area to area to support those, because fuel in an affected area becomes very important to sustain in daily operations to your citizens, and being -- those sites also being placed on a priority list to receive power back.

We understand that the medical facilities certainly should be on top priority list, because those patients that are housed in those facilities need that power, but then the communications systems should certainly rise to that level.

We feel that someone from FCC with the authority to assign frequencies in the affected area and have the authority to make that happen in a very

timely basis is going to help the incoming units or personnel especially.

In the fire service, if one of our USAR teams comes into an area and they're assigned frequencies that conflict with daily operations of people who are already living in that area, they need to be able to move those frequencies around, and you need someone that has the authority, on the fly, to make that happen for them.

We certainly need to enhance the program of the portable systems that all of the providers have, and to place them in strategic locations, close to the affected area, but not in harm's way, where they can get in and get set up, and then be of the understanding that those systems are going to be in place for months, in some cases, in areas where systems are wiped out, because that is something that it takes to, again, continue service to those citizens.

And we also need that individual from FCC to work with our technicians in giving them some type of leeway or guidance in a system to get the infrastructure back up and working. We may have microwaves that are off by a degree or two and are not communicating with one another, that just an increase

in power or moving the area that they function within a slight bit for a short period of time, until you can actually get personnel up there to re-adjust them and re-align them, but the system would come up on a temporary basis to at least let our people communicate and have that capability -- would greatly assist with what we do on a daily basis.

Our folks on the street, they like the units that they use, whether they be Maycom or Motorola or whomever, but when it comes to a time of emergency, they don't care what unit they're pushing to talk on, they just want somebody to be able to communicate with them, and that's what we're trying to get to in these times, is just to get something that works until we can get our systems back up online and get moving, and that's what I hopefully will be able to do here, and I'm honored to be a part of it. Thank you.

CHAIRPERSON VICTORY: Thank you, Steve. Let me turn next to Steve Delahousey, the Vice President of Operations of American Medical Response.

MR. DELAHOUSEY: Thank you. I serve American Medical Response in the four state of Mississippi, Louisiana, Alabama and Georgia. AMR is the largest provider of medical transportation in the

nation, serving 39 states.

In Mississippi, we provide approximately 40 percent of all ambulance transports done in the state. I'll limit my comments today on the impact of Hurricane Katrina on EMS communications in South Mississippi. The presentation will be in two parts: problems and challenges, and then success and past practices.

First, with problems and challenges. The Gulf Coast underestimated the magnitude of Hurricane Katrina, despite very accurate predictions from the National Hurricane Center. We were called in on August 26, the Friday before the storm hit, at approximately 10:00 p.m., 56 hours from landfall. The National Hurricane Center shifted the storm's path from Pensacola, Florida to Buras, Louisiana. They only missed it by 18 miles, 56 hours out.

Computer models predicted a very large hurricane, 200 miles wide, with sustained hurricane-force winds for 12 hours and tidal storm surge 28+ feet. This was unprecedented.

There were 250,000 people in Harrison and Hancock counties in south Mississippi, 11 hospitals, 15 nursing homes. Two hospitals were evacuated pre-storm. Three hospitals were evacuated post-storm.

Four nursing homes were evacuated post-storm.

I'm pleased to say that no lives were lost in any of the healthcare facilities or as a result of the evacuations. VHF communications with the hospitals was unreliable in this disaster. The disaster shelters were provided with portable two-way radios. However, they did not have emergency generator power, so the radios failed when the batteries died.

There were more than 25,000 non-institutionalized special needs patients with severe disabilities in these two counties. Many had to be evacuated by mutual-aid ambulances that had varying types of radio systems.

There were over 100 additional mutual-aid ambulances brought in to south Mississippi by the state and the private sector. Most did not have radio systems compatible with that of the local EMS lead agents. There were so many landmarks and street signs that were destroyed, that ambulances could not navigate without the use of GPS.

Shortly after the hurricane, there were hundreds of military helicopters in the air, yet we could not communicate with a single one to assist in county ESF-8 functions to help with medical

evacuations.

Two-way radio communications with local EMS worked well, but could not communicate with state and federal healthcare organizations. Many of the state and federal agencies could not communicate with their own regional and national offices.

Some cellular phone systems were first overwhelmed by call volume, and then failed due to lack of electricity and tower-site interconnectivity.

Some integrated digital enhanced network, or iDEN systems, worked well during the disaster. However, they were overloaded, and EMS and public safety agencies did not receive priority in two-way radio transmissions.

Those areas that lost public safety communications services had partial disruption of command and control capabilities for federal, state, and local public safety and disaster recovery services.

For some areas, technical support for public safety communications systems was inadequate, both pre- and post-landfall. Even in the areas where public safety communications infrastructure remained intact, fueling and maintenance of power generator systems proved to be a tremendous challenge.

Battery backup systems for public safety communications were inadequate in some locations. Truckloads of fuel, medical supplies, and pharmaceuticals were sent into the disaster area. However, many never made it to their destination, because there was no communication with law enforcement at the state borders, who would direct the disaster relief supplies to alternate locations.

The Hospital Association provided satellite radio telephones to all the hospitals in south Mississippi. However, most external antennas were destroyed. There were no federally contract ambulance pre-deployed to Mississippi or Louisiana for Hurricane Katrina. However, for Hurricane Rita, hundreds of ambulances were pre-deployed to Houston with instructions on how to communicate with the local EMS agencies.

I'll now address some of the successes and best practices that we saw. Harrison County, Mississippi's new 800-megahertz trunked public radio system never failed. All five cities and the county operated on this system. The damage to the radio infrastructure, that is the radio transmitters, receivers, antenna systems, towers, etc., was remarkably slight.

Protective fallback modes and systems operated as designed. Redundant battery backup systems worked well, and Harrison County system providing network operations for 14 hours until generators could be repaired or replaced.

My company, AMR, purchased hundreds of portable 800-megahertz radios to be used by mutual-aid ambulances. When the city of Pass Christian in west Harrison County, when their police and fire dispatch center was destroyed, all 911 calls, including medical calls, we rerouted to the City of Biloxi's PSAP. The switch was transparent, and it worked very well for four months.

E911 telephone service in Hancock County was disrupted, and calls were rerouted to the secondary PSAP at AMR's headquarters in Gulfport, Mississippi. Expanded capacity was added to the Harrison County system to accommodate for additional ambulance radios, as well as other public safety agencies.

Hancock County's VHF radio system was destroyed, so AMR deployed mobile communications command post vehicle to serve as a base station outside of the hospital in Bay St. Louis. For some reason, and this has already been mentioned, text

messaging on wireless devices seemed to work very during this disaster, even when voice communications failed.

Even when telephone line, landlines and cellular, began working, dialing the local 228 area code number was difficult. Long distance numbers would work. They worked very well. Eventually, in EMS, we purchased cell phones with long distance area codes so that we could use them locally.

In summary, I would just like to say that many lessons can be learned from Hurricane Katrina. This was the worst natural disaster in our nation's history. We should learn what worked well and what areas need improvement. Hopefully, this panel will take the necessary time to study all aspects of disaster-related communications and make decisions that positively impact the operability and survivability of both existing and future public safety radio systems.

CHAIRPERSON VICTORY: Thank you, Steve. Turning next to Dave Flessas, the Vice President, Network Operations of Sprint Network Services.

MR. FLESSAS: Thank you, Nancy, and good afternoon, members of the committee. My name is Dave Flessas. I'm Vice President of Network Operations at

Sprint Nextel Corporation.

Sprint Nextel offers a comprehensive set of wireless and wireline communications services to consumers, businesses, and governments, both in the Gulf Coast, throughout the U.S., and around the world.

When Katrina made its first landfall in Ventura, Florida, on August 25, only nine business days had passed since we closed our merger between Sprint and Nextel. Despite that challenge, as a result of strong pre-merger planning, when the storm hit south Florida and later hit the Gulf Coast, our newly formed company of 80,000 employees came together with a unified and large-scale restoration effort.

Our network team's initial response to Hurricane Katrina and its expected service impacts actually began four days before the storm's Atlantic Coast landfall.

As part of our emergency plan, hundreds of Sprint Nextel engineers and technicians across the south conducted their standard list of hurricane preparations, completing checklists at 72-, 48-, and 24-hour intervals before landfall. As part of this process, crews pre-positioned generators and diesel fuel, readied dozens of specialty vehicles, and assembled tools and supplies needed to repair damaged

electronics and restore service to our customers in the region.

On August 30, the day after landfall, in Plaquemines Parish, our crews spread throughout the Gulf Coast to begin to recover and restore communication services to the devastated communities.

These communities stretch across an area of about 90,000 square miles. That's just less than the geographic size of the District of Columbia, Virginia, Maryland, and Pennsylvania combined.

Following initial field inspections, we reported widespread wireless outages on both the Nextel national network and the nationwide Sprint PCS network. In addition, we announced service disruptions to long distance voice and data customers across the region. We had a total loss of our New Orleans long distance switch and our Biloxi pop site.

We also sustained significant damage to several regeneration sites around Sprint Nextel's fiber route and numerous wireless sites in the five-state area impacted by the storm.

As we all know, wireless and wireline network equipment needs commercial and electric power to work, and while many Sprint Nextel sites and facilities have backup generators or batteries, heavy

flooding destroyed some of those sites.

While backup power offered some temporary relief to wireless sites without commercial AC, the vast flooding across the area made it impossible to deploy generators to the sites after the batteries ran out. Sites facing telco outages were even harder to bring back online.

In addition, as reported in the media, in areas of New Orleans, there were unexpected security issues to contend with, requiring us to conduct restoration work only during daylight hours, while accompanied by armed guards we had hired to protect our employees and contractors. Further, road closures in the hardest hit areas of Louisiana and Mississippi disrupted our efforts to deploy and refuel cell site generators in the early days of the restoration.

In mid-September, we estimated the financial impact on our company to be between $150,000,000 and $200,000,000 net of expected insurance recovery. This estimate includes capital and operating costs primarily associated with restoration of the infrastructure and retail operations billing relief for impacted customers, etc.

But of course, that estimate doesn't include the personal and financial costs of more than

500 of my Sprint Nextel colleagues in Louisiana, Mississippi, Alabama, and Florida faced in the storm's aftermath, many of whom were involved in the recovery effort themselves.

It's important to note that our company's response to the storm wasn't limited to the network team that I'm a part of. The work of two other groups at Sprint Nextel played significant roles in our ability to promptly restore service to our customer and bear mentioning today.

The first group is Sprint Nextel's Enterprise Incident Management Team, or the EIMT. This is a group within our company that oversees the company's overall disaster response. Within 72 hours of the Gulf Coast landfall, the EIMT deployed a temporary mobile command center with full network and IT capabilities to coordinate the company's massive recovery effort.

Located at the Baton Rouge State Fair, the facility which our employees on the ground dubbed "Sprint City," housed our main base of operations in Louisiana. Spread over several acres, Sprint City housed approximately 360 people during the recovery, including network recovery personnel, security, IT, facilities, salespeople, environmental health and

safety officers, business continuity officers, our state EOC representatives, a full-time pilot, a nurse, and a mental health counselor.

Along with the EIMT's work, our response to the hurricane was greatly aided by the work of Sprint Nextel's emergency response team, or the ERT. Unique in our industry, the ERT is a small group of communications professionals with extensive emergency communications experience who work side-by-side with public safety and other state and local government agencies in their response and recovery to emergencies and large-scale events.

Hurricane Katrina was, in fact, the twentieth Presidentially declared event that the ERT has responded to since that team was formed in 2002.

To help respond to the immediate communications needs of the emergency responders working in the region, within four hours after the Gulf Coast landfall, the ERT arrived in Louisiana with five SATCOLTs, that's satellite cells on light trucks, and thousands of handsets equipped with traditional Nextel walkie-talkies, as well as some enabled with direct talk, which is Sprint Nextel's off-network walkie-talkie service.

Both services provided first responders

critical communications capabilities at a time when the region's wireless networks were disabled by the loss of commercial AC and local telephone services, two essential interdependencies needed for wireless communication.

Sprint Nextel is proud that our emergency response team directly supported the work of approximately 75 federal, state, and local law enforcement agencies, fire departments, EMS units, emergency management agencies, and military units working to help the region recover from this storm.

In addition to providing tactical communications when public safety systems were unavailable, and FCC authorized air-to-ground communications for MedEvac helicopters, the ERT deployed SATCOLTs to 12 locations, including downtown New Orleans and several Parish emergency ops centers.

There were many lessons learned over the course of Hurricane Katrina and through subsequent restoration efforts. Through Sprint Nextel's formal events analysis program, we have conducted after-action reviews across the organization and have identified, documented, and are now driving improvements in these areas.

These improvement areas run the gamut

across the company and beyond, to vendors, partners, and other service providers. There are five key areas of improvement where Sprint Nextel is focusing significant resources.

The first is cell site hardening. We're focused on ensuring maximum cell uptime, even during intense storms and as such, additional emphasis will be placed on generators and alternative means of transport facilities in the areas of significant risk.

Second, business continuity planning. We're going back and reviewing and revising site vulnerability analysis and putting forth additional mitigation plans. Additionally, we are improving our overall command and control structure during the storm preparation and restoration to streamline the process and further facilitate service restoration.

Third, external partnerships. We are reaching out to vendors, partners, and other service providers to collaborate and improve ways to respond to these types of events. This would include working with power companies and other telecom providers to help prioritize restoration efforts and develop mutual aid processes.

Fourth, those restoration processes. We're reviewing our own restoration processes from top

to bottom in order to reduce cycle times, improve prioritization methodologies, and provide better restoration forecasting.

And fifth, communications. This storm certainly tested the industry with regard to communications, both within our organization and to external organizations. Sprint Nextel is putting in place more rigor around tactical communications during restoration, but is also focusing on communications externally, as well, such as with customers, emergency response agencies, vendors, partners, and other service providers to ensure necessary and timely communications.

There are several industry-wide issues that have also been identified. The first, and both Greg Bicket and Steve Davis spoke to this earlier, telecommunications carriers need to be designated as emergency responders, so that we may receive government assistance and priority access to fuel and other resources from vendors and the federal government during times of crisis.

For example, establishing security for employees and facilities delayed our recovery efforts, and companies were forced to obtain private security forces. Furthermore, an emergency responder

designation would allow our crews immediate access to impacted areas to ensure the fastest service restoration possible.

Second, there's a need to clarify roles and responsibilities of the various government agencies. The National Response Plan was intended to designate the individual roles of the responding government agencies and establish a comprehensive process for managing the incident. However, we believe the National Response Plan needs to be reviewed, and exercises should be conducted to ensure personnel are trained and issues are identified before a disaster occurs.

Lastly, coordination between telecommunications carriers, power companies, and responding government agencies at all levels needs to be enhanced. Better communication and coordination of response activities would increase the effectiveness of the overall recovery and ensure efforts are focused on the right priorities.

The process of reporting status information needs to be efficient and aimed at assisting response efforts. Several government and industry forums, such as the National Security Telecommunications Advisory Committee, NSTAC, the

National Coordinating Center for Telecommunications, NCC, and the Service and Network Operations Group, are also examining the subject. We need to ensure that we are heading in a common direction and are working to resolve issues to better prepare for the upcoming 2006 hurricane season.

In conclusion, on behalf of Sprint Nextel, thank you for the opportunity to participate in the important work of this committee. We recognize that in the midst of a crisis, all of us on the panel and those of us who are following the proceedings today want the same thing. Put simply, we want reliable networks, and in times of crisis, we want to minimize service disruptions and restore service as soon as possible.

I look forward to working with my fellow members to help achieve that goal. Thank you.

CHAIRPERSON VICTORY: Thanks, Dave. Let me turn next to Marty Hadfield, the Vice President Engineering at Entercom.

MR. HADFIELD: I am Marty Hadfield, Vice President of Engineering for Entercom.

During the first days following Katrina, nearly 100 radio stations and almost 20 television stations were knocked off the air in Alabama,

Louisiana, and Mississippi. We know that radio is a source of information for people every day, but following a disaster, it's more than just a casual source of what's happening. It's a fundamental support for survival and recovery, and nowhere was that more important than in New Orleans. That's the home of Entercom's flagship station, WWL.

WWL is a primary entry point station for the emergency alert system, and we knew that we had to stay on the air, but the New Orleans streets were blocked, the building housing our studio was evacuated, and we'd already established a small broadcast studio at the Jefferson Parish Emergency Operation Center as part of our pre-disaster planning.

That wasn't going to work for the long term, so we sent a staff member to look for alternate broadcast studio locations. We abandoned competition, focused on the community's needs, and we ended up with our friends now at Clear Channel's facility up in Baton Rouge.

Thanks to the FCC's instant reaction in granting waivers to several broadcast rules, we were able to coordinate the simulcast of WWL's programming on any AM or FM station in the region, thus allowing an ad hoc emergency network to spring to life.

At its peak, over 50 AM and FM stations may have been carrying the common emergency and news programming to the people of the Gulf Coast. People not only listened for news, but also called in with heartbreaking requests for help and rescue. It's not an overstatement to say that lives were saved by the radio waves.

Our disaster planning was good, but a fundamental lesson is the need to cooperate and combine resources, which is what we did with Clear Channel and other broadcasters, in order to handle the magnitude of this emergency.

Our original disaster contingency planning had been developed from years of exposure to lesser hurricanes and other disasters. However, we had to be flexible, let people think on their feet, and be willing to entertain unexpected solutions to unexpected challenges.

We did have a few problems, and two of the areas of focus for this panel, as we've heard before, fuel -- availability and transport was a real issue. Even when fuel was available, the conditions following the disaster made it almost impossible to get to the fuel depots and then transport back to our facilities.

We also found weakness in our internal

emergency communications, Cell phones, satellite phones, and other means of contacting our personnel were often not as effective as two-way radios. Fortunately, our emergency plan had included all of these forms of communications.

I want to emphatically state that it was a combined effort among Entercom, Clear Channel, the FCC, and local public utilities, that really kept WWL on the air. In addition, I'm proud to say that through the advanced planning efforts of FEMA and PPAC, we had some amazing successes.

And I'll just wrap this up. I'd like to personally thank Mr. Chanel LaGarde of Entergy for his resolute drive to re-establish normal utility power to WWL's transmitter site, as well as Mr. Peter Doyle and Mr. Richard Lee at the FCC for their service and attention to not only the needs of the broadcasters, but also the general public.

And I'm very thrilled and pleased to be able to serve on this panel. Thank you.

CHAIRPERSON VICTORY: Thanks, Marty. Let me turn next to Jim Jacot, the Vice President of Cingular Network Group at Cingular.

MR. JACOT: Good afternoon. Nancy, I would like to thank you, Commissioner Martin --

Chairman Martin, and the Commission for leading this effort and for giving us the opportunity to participate in providing the solutions to Katrina-type disasters in the future.

Like most of us here, Cingular had experience in operating through natural and some man-made disasters. So prior to Katrina, our disaster recovery plans were documented, restoration procedures were rehearsed, and provisions were laid aside.

Past experience with hurricanes had taught us to expect three points of probable failure during the event: loss of commercial power, loss of telecommunications connections to our cell sites in the area, and damage to the towers themselves, usually to the antenna arrays.

Solutions to these are well known. We've applied them in the past. Getting generators out to locations that don't have permanent generators in place, fuel to power the generators, tight coordination with the local exchange carriers to get the communications back up and when that fails, using microwave equipment to establish new connections, and getting technicians -- an army of technicians out there to be able to deploy all these assets, and then the logistics and supplies behind them to keep those

technicians fed, housed, and to keep the materials coming they need to get the job done.

As long as we have ample volumes of generators, fuel, and equipment, and the technicians are made available, our experience is, is that generally within 24 hours, we're in full swing in restoration, we're getting critical services restored. Within 72 hours, most of the network's back up, and by the end of the week, we're taking our generators back and heading down the road being prepared for the next disaster.

So 48 hours before Katrina made landfall, we had 400 -- 500 portable generators; three portable cell sites, including some that were satellite-enabled; about 250,000 gallons of fuel; and an army of communication technicians that were either at or en route to our pre-staging areas.

These areas are provided close enough to the expected event that they can get there quickly after disaster strikes, but not so close that they become part of the casualty list themselves.

We had also opened up reciprocal local roaming with T-Mobile, the other major GSM provider in the area, to allow all GSM subscribers every opportunity to complete their calls, both during the

heavy traffic periods while pre-hurricane evacuation was taking place, through the hurricane and then through the restoration period afterwards.

By the morning after Katrina landed, it was clear that this was not a normal hurricane event. Damage was both intent and widespread. The hurricane inflicted significant damage to our wireless service infrastructure in Mobile, Alabama; Jackson and Hattiesburg, Mississippi; Lafayette and Baton Rouge, Louisiana; and lighter damage in Florida and Birmingham, Alabama. In these areas, service was never lost, but coverage was significantly impaired.

However, damage to New Orleans, Louisiana and the Gulfport-Biloxi, Mississippi area was more extensive, and large portions of these areas were completely off the air.

Where the impact from a normal hurricane was several hundred cell sites off the air for 24 to 48 hours, at the worst of Katrina, we had over 1,000 cell sites off the air, and in certain areas, the restoration time was not measured in days, but rather weeks.

The most serious damage to our own network and to the commercial power and local exchange networks we depend on, was from the flooding that

occurred, primarily in the New Orleans area. In New Orleans, we lost one switch in one of our two switching centers, and all other switches were isolated as a result of losing telecommunications out of the building.

It's worth noting that we had deployed fault-resistant transport rings from multiple local exchange carriers, so we had both physical diversity, as well as carrier diversity. However, all transport facilities to both switching centers completely failed. We had no connectivity at all out of either one of those.

And the loss of the local exchange carrier switching centers meant that our New Orleans subscribers couldn't receive calls, even when they weren't located in New Orleans. Even when they'd evacuated to all the other areas, calls couldn't get to them, because they had to route through the local exchange carrier's switches, which were also down.

The network in Biloxi was isolated from its host switching center in Mobile, Alabama. By the end of the week following Katrina, service had been fully restored to Mobile, Jackson, Hattiesburg, Lafayette, Baton Rouge, and surrounding areas, as well as all of Florida, although a few pockets of weakened

or reduced coverage remained.

Service had been partially restored to the Biloxi-Gulfport area, and some very limited service was available in part of New Orleans. Two weeks after Katrina hit, service had been predominately restored to Biloxi-Gulfport area, although there was some congestion generated by the higher-than-normal demand on services, as people were depending heavily upon their cellular phones for their basic communications.

The local elect cannons were back in service, restoring the ability of calls to be completed to our customers who had evacuated the area. Service in the most damaged parts of New Orleans remained very restricted at that point.

Even a month after the disaster, we still had hundreds of generators running to provide power to equipment and as of today, 23 of those cell sites are still on backup generators.

What worked well? We never did run out of materials. The generators, fuel, equipment and technicians that we needed in order to continue to restore service, we never ran short of. We never had to wait because we didn't have a generator when we had an opportunity to deploy it, and we never had generators run out of fuel because we didn't have fuel

to provide.

Coordination, cooperation with emergency response organizations and other telecommunications companies was very good. There was -- we felt everybody pitched in. There was no competition during Katrina. Everybody was there to do what they could to get service back to customers.

Certainly, or as an example, Bell South, a local exchange carrier, set up a network operations center to service wireless carriers, giving us an opportunity to coordinate closely with Bell South and the other wireless carriers, setting priorities for getting local transport set up to cell sites and keeping us well informed about where service was going to be restored and where it was going to be longer.

Also, the expeditious granting of temporary operating authority for microwave licenses by the FCC allowed us to get microwave up where we couldn't get transport up otherwise.

What didn't work well? The damage to the commercial power grid and landline telecommunications in the core areas of New Orleans. The long-term loss of commercial power meant that we needed a massive and long-term effort to deploy generators and continuously re-supply fuel, adding to the challenge of moving

materials in and out of the impacted areas.

While we could deal with the loss of telecommunication links at the individual cell site, the loss of links for our switching centers and loss of the elect tandems had fewer solutions.

The lack of access to the impacted area. There were areas of the Louisiana and Mississippi coast where we could not access our equipment sites for many days. While the security concerns which dictated these delays were valid, they slowed our ability to assess the damage situation and to provide service restoration. Even when we brought in our own private security forces in order to facilitate this, we were still restricted by both safety concerns, particularly during nighttimes, as well as just where access was allowed.

Lack of communication services. Like everybody else, we were impacted by the lack of communications. We did deploy satellite phones. We had over 1,000 satellite phones in use at one time. Several hundred loaned out to emergency response units outside of our company, as well as ones we were using internally, but even the satellite phones were severely impacted by the congestion resulting from the high demand placed on the system.

In addition, we did provide in excess of 1,000 free cell phones, countless batteries, and suspended billing of wireless service for up to 30 days to try to ease the burden of people who were now depending upon wireless service for their primary needs of communications.

As a result of the lessons we learned in Katrina, we are implementing some significant changes to our disaster response procedures and resources. We believe these changes will improve the speed and effectiveness with which we can respond to large-scale disaster incidents such as Katrina presented. However, our dependency on commercial power, the landline communications link, and quick access to impacted areas remains.

We appreciate the opportunity to work with this panel and to contribute to solutions which will serve to provide a faster, more effective telecommunications response to future Katrina events. thank you.

CHAIRPERSON VICTORY: Thanks very much, Jim. Let me turn next to Tony Kent, Vice President, Engineering and Network Operations for Cellular South.

MR. KENT: Thank you, Madame Chairman. I also want to say I'm pleased to be a part of this

panel. Cellular South is a regional wireless provider based in Jackson, Mississippi, and we operate in all or parts of five southeastern states.

The areas that we cover that were most impacted by Katrina were coastal and south Mississippi, coastal Alabama and to a lesser degree, central and even north Mississippi.

I want to make a few points about infrastructure, good and bad, and fellow panel members have already made all of my points, so I'll be brief. I think we all saw the same problems with this -- Yes we do.

First, many, and actually most of our cell sites in the direct path of the storm were knocked off the air temporarily, due to, guess what, backhaul, primarily, and then with power.

So -- and some of them were flooded by this storm surge of 30+ feet, and all of those had to be completely replaced. We also had, as has already been pointed out, a great deal of line and antenna problems from all of the wind.

Some of the successes. A good disaster plan in place with the major infrastructure vendors, which for us was switch and cell site vendors, line and antenna suppliers, and particularly microwave

vendors. I want to say one word about, specifically, unlicensed microwaves, and I think that's been brought up in here. That was instrumental in us getting our network back on the air, to hop over the bad T1 links.

Backup generators are absolutely indispensable. They have to be there, and they have to work, and one more point about them is you have to fuel these things, and having fuel is absolutely essential, but getting the fuel in to where these things is also a problem -- a real problem, and there needs to be coordination between the public safety people and us carriers prior to a disaster like this so that we know that we can have access to our sites.

Another thing that held up well was the tower systems. There were thoughts after the hurricane that all the towers had been knocked over. This was not the case at all. In fact, of all the towers that Cellular South owns along the Gulf Coast, we had none that were knocked down or had to be replaced, and only one of the towers that we rent space on was damaged to the point that it had to be replaced. So this was a good point for us.

Issues that need attention. I've already spoken about the need for fueling these generators and getting access into these areas to fuel the

generators, and also prior to a disaster, for carriers such as ourselves, Jim and all the other guys, to meet with the public safety officials and to make sure that we have a good plan of how we can get in and out and get access to our sites to get them back on the air. Thank you.

CHAIRPERSON VICTORY: Thank you, Tony. Let me turn next to Kelly Kirwan, Vice President, State and Local Government and Commercial Markets Division at Motorola.

MR. KIRWAN: Good afternoon. I wish to thank Chairman Martin for convening this panel on a topic that is vital to the health and safety of all Americans. I also want to thank Commissioners Copps, Adelstein, and Tate, and express appreciation to Nancy Victory for chairing this panel, and further acknowledge my fellow panelists and our wonderful customers on the panel, who bring a wealth of knowledge and experience and information to the table.

My name is Kelly Kirwan. I'm Vice President of Motorola's State and Local Government and Commercial Markets Division, with responsibility for sales in 26 states in the eastern United States and Washington, D.C.

Today I'll be addressing the public safety

side of our business. I led Motorola's emergency response team in the wake of Hurricane Katrina's devastation to the Gulf Coast, and welcome the opportunity over the next six months to share with the Commission our experiences during this tragedy and our recommendations for the future.

Our history in providing mission-critical public safety voice and data communications dates back to over 77 years. The communications systems we develop are in use across America, connecting police, fire fighters, and emergency management, and many other government agencies.

In these brief comments, I will express Motorola's views on the communications issues, which affect first responders' and federal officials' ability to communicate during Hurricane Katrina. I will also present a wide range of solutions available to better prepare our public safety communications systems and first responders for such disasters in the future.

Motorola has about 20 public safety customers, primarily the Louisiana State Police, Counties in Mississippi, and Parishes in Louisiana, that were impacted. Approximately 72 hours to Katrina making landfall, we activated our corporate emergency

response plan. As a result, we surveyed and inventoried every single piece of public safety emergency communications equipment, ordered surplus equipment, and shipped it immediately to staging areas in the Gulf Coast region. We mobilized more than 100,000 pieces of equipment, and more than 300 of our employees were on the front lines working directly with customers to anticipate needs, understand their issues, implement contingency plans, and offer any additional assistance.

Why were so many public safety communications systems taken down by the storm? Simply put, Katrina, at one point a Category 5 hurricane, was tremendously devastating, with extraordinary and accompanying flooding. Even the most robust and reliable public safety networks are vulnerable to these conditions.

Together, our responses to Hurricane Katrina and Rita have become the largest disaster recovery effort in our history. What lessons can be drawn from the hurricanes? There are several.

One is communication systems need to be designed and constructed for worst-case scenarios expected in the local regions. First responders have called this a need for reliable operability, meaning

that the systems must first survive and function. Systems that are designed to survive worst-case scenarios must be part of the planning for new and upgraded systems. Even relatively new systems should be examined to determine whether additional hardening is needed.

This is location specific. There is no one-size-fits-all solution. Whether the risks are hurricanes along the coast, twisters in Tornado Alley, or earthquakes along major fault lines such as those on the west coast and in the Midwest, Katrina has taught us one overriding lesson. If we don't prepare for the worst-case disasters, our systems will be very vulnerable when they do occur.

Second, operability must be augmented by the larger notion of true interoperability. Katrina is yet another reminder of the inadequacies of responding to agencies' ability to effectively talk to one another by private radio. Spectrum, money, and planning are all part of the solution.

We have a national standard for interoperability. Over ten years ago, the first responder community recognized that one open standard for future digital wireless systems was imperative. They created the standard known as Project 25. Today,

there are more than 20 manufacturers of Project 25 equipment for public safety.

While most state-wide system plans incorporate the Project 25 standard, local and state agencies don't have adequate funding and spectrum for a long-term fix of system availability and interoperability.

The Department of Homeland Security has estimated that it could take 20 years to complete this work at the pace it is currently being funded. There is a growing consensus that this pace must be accelerated significantly. Both the House and Senate have approved legislation to transition television broadcasters from the 700-megahertz band by 2009. It is absolutely vital that this legislation become completed and become law, because it will finally free up spectrum that has been allocated to public safety for nearly a decade.

Spectrum is one advantage that New Orleans did have, because TV broadcasters are not blocking 700-megahertz public safety spectrum, allocations in New Orleans or Louisiana. This spectrum was available for first responders. As a result, Motorola was able to bring in emergency trucks operating on this spectrum, hand out hundreds of radios, and operate as

soon as first responders needed the system. Without 700-megahertz being available in the Gulf Coast region, things could have been much worse.

Should a major emergency arise today in cities like New York, Los Angeles, or San Francisco, that additional spectrum would not be available to first responders.

Third, resources should be provided to assure mission-critical public safety communication can be restored on an emergency basis in any area of the country within 12 hours. One way to accomplish this is preposition around the nation vehicles that are self-contained and come equipped with hundreds of portable radios for immediate deployment.

Fourth, priority must be given to alternative sources of energy, such as portable fuel cell cartridges to power handheld public safety radios in the event of electric power outages preventing recharging radio batteries. With this technology, radios can be re-fueled on the go, even if electric power to chargers has not been restored.

Fifth, we must augment our primary networks with alternative technologies that can provide situational communications, such as mesh networking and satellite. We should move towards a

more sophisticated use of existing satellite communications to tie together different government entities during emergencies. Recently, Motorola tested a Project 25 voice call, along with a live video screen, over a broadband satellite link. This demonstrate the immensely flexible use of this Project 25 standard, which can connect any public safety, military, or relief vehicle.

Any vehicle having an innovative satellite antenna can be in communications with a broadband, geosynchronous earth-orbit satellite. That satellite then takes the signal, whether voice or broadband data, and returns it to any other location with command and control capabilities outside the immediate area of disaster.

Signals could also be routed between vehicles in different areas where they, in turn, can provide hotspots for first responders' portable handsets, also using Project 25 technology.

Mesh networking, with its roots in the military, can serve as a rapidly deployable mobile broadband solution to relay critical information between responding units. Mesh can be used with pre-deployed infrastructure or an ad hoc broadband network formed instantly with other users. It is deployed

quickly, because it does not require towers or other land-based infrastructure. Mesh uses multi-hopping technology to allow the devices, in police radios for example, to become the network. Such mesh-enabled architecture delivers real time data to detect, prevent, and immediately respond to any problems.

Sixth, an important component of the National Mission Critical Response Effort is a federal civilian agency system that is truly nationwide. It is usable in geographies that cover as much of the population as possible, and again is built on the open standard of Project 25.

This system must eventually be fully interoperable with state and local systems. While it exists to some extent in many federal agencies today, a nationwide federal law enforcement system is currently under procurement.

The Justice Department is acting on behalf of some 30 federal agencies to procure a network called the Integrated Wireless Network, or IWN, which will tie together existing Project 25 systems for the truly national federal agency system.

A final component of the Federal Mission Critical Communication Solution is an interoperable network of networks built on and operated by the U.S.

military, largely covering only its U.S. military facilities, and again built to the Project 25 standard. That network of networks has been mandated in DoD directives, and is about 75 percent complete or funded.

In conclusion, there is ample room for improvement in serving the American people's need after any disaster, whether caused by terrorism or Mother Nature. Fortunately, there are clear ideas for improvement to be readily achieved with dedication and sufficient spectrum and financial resources.

I look forward to working with this panel to consider these and other emergency recommendations we may take to the FCC for consideration.

CHAIRPERSON VICTORY: Thank you, Kelly. Next up is Jonathan Linkous, Executive Director of American Telemedicine Association.

MR. LINKOUS: Thank you, and thanks for the opportunity of participating and providing some comments. It's an important panel; it's been an interesting day, a lot of interesting comments already.

American Telemedicine Association represents medical service providers around the country who use telecommunications to provide clinical

services over distances. There are about 200 medical networks, telemedicine networks in the country today, linking every major hospital system and a little over 3,500 sites, anywhere from a rural clinic to a suburban hospital to a doctor's office to schools, all over the country.

In the affected area, in Mississippi, for example, there is a telemedicine network that links about 11 sites throughout the state with the University of Mississippi Medical Center, which is located in Jackson, Mississippi, which is the only Level I trauma center in the state.

For those of you who don't know, Level I trauma center is the most advanced life support care center, where you would take those medical cases that are the most in need of medical care.

In Louisiana, LSU Hospital, located in New Orleans, serves, or shall I say used to serve, eight state hospital systems and provide medical care, as well, to the correctional care system. If you needed medical specialists located in some other part of the state, you would get referred either directly or through telemedicine to the hospital center located in New Orleans. That hospital is now open for seeing some patients and clinics but needless to say, the

medical system is down.

One of the causes, one of the results, I guess, of the hurricane to the medical centers in the affected area was a tremendous utilization of the medical services. The medical center in Jackson, for example, received over five times its normal referral services -- referral patterns from patients transferred in to them, not only from ambulances, but from private cars, from police cars, coming not just from their surrounding area, but from other states.

In many cases, the hospital and hospital staff had no idea what they were coming in with, what the problems were, or how many people were going to come in, thus linking some of the issues that we had.

Fortunately, at least the medical centers in some areas like in Baton Rouge and in Jackson were able to create their own video networks to link the local hospitals in those areas so that they would have some ability to share information about what patients were coming in.

However, there was a considerable problem, of course as everyone has shared here, not only getting access to telecommunications networks that were largely down, at least for the first few hours, maybe first few days, but getting access to the

existing emergency network services that were going on and may be available to other providers in the area.

Remember, in a Level I trauma center, that is where a lot of the first responders, where a lot of emergency vehicles, that's where they end up. That's where they end up going to collect information, to take patients, and a lot of times, those are the very centers that are not getting the information and not getting part of the network, so they're operating blind in many cases.

There's the call priority centers and call priority regulations in this country that we've mentioned several times there's a concern about how those are operated and whether medical centers are part of that. I think that's something that this group should look into, take a look at and see, and then a couple of other suggestions.

Of course, the medical centers that we deal with, that we work with, are all interested in telecommunications networks that are safe, secure, and consistent in providing the medical services. It's not okay to have seven hours. It's not okay to have three hours down when you have a patient that needs care immediately, and if you can have an emergency surgeon get on the videophone and be able to see a

patient and provide immediate care and referral services, that makes a difference every day. Every day that makes differences in people's lives.

So what our hospital systems are looking at, too, right now are looking at redundant systems, not only using the public switch network, not only looking at the networks that are out there -- that have done tremendous work in trying to get the systems back up -- but looking at other types of networks, alternative providers, other types of systems that they can use on an ongoing basis to ensure that their network is up and the communications system is up 24/7 without any interruption whatsoever.

There's military communications channels that were being used throughout the area, and I think that was a tremendous help. Unfortunately, I the communications systems that were deployed by the military were not able to interface with the existing medical systems, the telemedicine networks, the medical communications networks that were out there, and so in several cases, there were many hours that were lost in trying to link up video signals into the existing medical networks that were out there that either the military or the DMAT teams were using.

DMAT, of course, is an important system,

providing emergency medical care into the affected areas. However, one of the problems there is the medical system in DMAT has not really taken advantage of a lot of the communications and advanced networking that a lot of the members around this table can offer them.

At the time of the situation with Hurricane Katrina, I was in direct contact with the directors of the DMAT teams and the Department of Health and Human Services. They were totally unable to do anything with medical response teams, even though our association had probably 50 to 60 hospitals around the country volunteering time of their medical staff using telecommunication services to provide services remotely using telecommunications into the areas that might have needed services.

In some areas, it was probably feast or famine. I'm sure there's a lot of areas where there was too many people providing assistance, too many people providing us support, and I know of many cases where there were some hospital systems that were sent in and medical providers that were sent in, but probably not sent to the right place, and not sent to the right specialist at the time.

Again, communications networks linking

into the first responders and some of the people on the ground would have made a tremendous difference.

Finally, as I mentioned before, one of the other things that we saw in a case as severe as Hurricane Katrina is a tremendous amount of transfer of patients between states. Within communication networks, state boundaries are important, but in the medical networks, the state boundaries are law.

If you're licensed in Mississippi, you can't practice in Alabama, except in some emergency situations. The medical networks and medical systems are built within those states. So it becomes very difficult in times of disaster, when you have so much migration of patients and need from one hospital or one clinic in one area, to communicate with systems located in another state.

Following the September 11 disaster in this country, the former chairman of the FCC asked ATA to provide a white paper on what could be done. Our recommendation was to support the interconnection of medical systems across state boundaries, between telemedicine sites.

We felt like that was a very critical way of providing assistance and providing, again, communications so that these trauma centers and

medical centers would be able to understand where the patients are coming from and where the need is.

That is what we suggested to the FCC four years ago, and I would say that's what we suggest to the FCC today, as well. Thanks.

CHAIRPERSON VICTORY: Thank you, John. Let me turn next to Adora Nweze, the President of the Florida State Conference of the NAACP. She is also a member of the National Board of Directors of the NAACP, and was the director of their hurricane relief efforts, as well.

MS. NWEZE: Thank you, Madame Chair. I certainly would like to join my other panel colleagues in thanking both you and Chairman Martin for pulling us together and then inviting us to participate.

Within the NAACP, I want to just bring a few remarks and do it the other way around. I'd like to start out with our recommendations first.

It's very important to us, as we have worked very hard in the aftermath of Katrina and every other hurricane that's hit this land, we are concerned about the fact that English-only policy in this country has not allowed us to get information out to people who speak other languages.

It doesn't matter whether it's one person

or more than one, and in addition to getting the information -- emergency information out to people who speak other languages, we also want to ensure that people who are staffing the emergency agencies speak other languages, to be able to communicate, and that includes the medical field, as well.

We are concerned -- that's short-range. That's something that I think this panel can make a recommendation on, and I think funding can be allocated. It's minimal cost, compared to everything else, and it can be done without a whole lot of bru-ha-ha about it. That's short-term.

On a long-term basis but nonetheless equally as important, there needs to be an infrastructure put in place. Once we get the infrastructure put in place, we need, through our various agencies sitting here, to be able to access communities that don't get any information.

For example, when we talk about those who are physically and mentally challenged, when we talk about the elderly, when we talk about the poor, I want you to know right now, many of those communities have not gotten anything. We found them as we moved around. As a community-based organization, we hit the ground and we know what's on the ground, and we can

tell you that we can do better than this, we think, certainly through communications. We can find a way to find out where everybody who is living in a community is located.

Obviously, in the New Orleans effort, as we all worked so hard to try to reconstruct and rebuild, we want to be able to bring those individuals and families back, and I think the agencies sitting around this table are going to be absolutely key in the restoration effort, as well as getting ready for five months from now, because we've only got five months to get ready for the next hurricane, and I understand that season will be worse than the ones we've seen in the past. So we need to gear up, and gear up in a hurry.

Having said that, I want to share that the NAACP has 2,200 units across this country, and in Alaska, Germany, and Japan. We went online in the aftermath of Hurricane Katrina and developed command centers in Biloxi, Mississippi and Jackson, Mississippi and Baton Rouge, and we put one in Fort Walton Beach to provide support to Alabama. And through those centers, we funneled all of our resources: food, clothing, moneys for individuals and families, educational resources for children that had

been displaced, and building communication with over 100 partners.

Next month, we're going to roll out a plan where we're going to be rebuilding houses in Mississippi, we're going to be rebuilding homes, obviously, in New Orleans with Habitat for Humanity and all of the other agencies that we are working with. We have a very strong relationship with the Department of Justice Office of Community Relations, with FEMA, American Red Cross, Salvation Army. There is not an agency in this country that the NAACP has not tapped to help us to bring relief, restoration, and rebuilding to those persons, individually and families that have been impacted and affected and have not yet to date been helped.

And so I think this participation on this panel through us is absolutely critical. As I work with you, I'm hopeful that we will be able to bring some semblance of support to all of these efforts, even though we cannot cure everything overnight. I understand that by June, the report will not reflect everything, but I do think the report can reflect some immediate short-term assistance and then make recommendations on long-term needs.

CHAIRPERSON VICTORY: Before I introduce

our next speaker, I'm going to note that after he speaks, we'll take a short ten-minute break, just that everyone has a chance to stretch, and then we'll go into the home stretch of our panel members and their opening remarks.

So with that, let me introduce Eduardo Pena, a Board member of the League of United Latin American Citizens, for your remarks.

MR. PENA: Thank you very much, Madame Chairman. I appreciate the invitation to participate in this panel, and I hope that together, we can come up with some solutions that will help improve the quality of services that are provided to the people that are in need, particularly after these natural emergencies.

My name, again, is Eduardo Pena, and I'm a former national president of LULAC. Some of you may not be familiar with the name LULAC. It is an acronym for the League of United Latin American Citizens. It is an organization that was founded 78 years ago and has been around, mostly as a patriotic civil rights organization and a civil service organization.

We are the largest Hispanic organization in the country, and we have membership in all of the states throughout the country. Those of you who have

heard, may have heard of the great increase in the number of Hispanics as part of the population of this country. Let me assure you that it is true, and that we have expanded into areas are not heavily populated by Hispanics, and now they are, including, of course, the area affected by Katrina.

We are very concerned. Our organization was involved in bringing food and money to the affected people in the area and we came back with horror stories about the conditions that afflicted the Hispanic community in the Katrina-affected area.

With respect to the mission of this panel, we learned that all of the communications, all these wonderful things you're talking about, all these heroic efforts that were made to restore communications in the area, didn't reach, didn't help the Hispanic community.

Most of the residents in that area, in Louisiana eastward all the way to the panhandle of Florida, are primarily immigrants or immigrants who have limited English capacity and who depend on Spanish language, still, to understand the basic -- what they are supposed to do.

And because of that, they're greatly limited in terms of making friends and becoming

involved and being integrated into the community, and most of those people are recent immigrants, but many of the total number of people in that area are limited-speaking, Spanish-speaking, limited-English-speaking capacity.

And so it turns out that there were a lot of accidents, a lot of miscommunications learned that affected the ability of people to get services, to get help, to be able to communicate about problems that they might have, and we need to make sure that in the process of this commission, that we make sure that services are expanded to include all people who are not able to communicate in English, as well.

There was one radio station in New Orleans that used to be the only Spanish station in the area, and it, of course, got wiped out by Katrina. But there was a lot of help provided by members of your industry to help bring it up and open it again, and I appreciate -- we appreciate that very much, because communication was badly needed.

But we need to have more stations that speak Spanish in that area, now that the community has increased tremendously in the last five years or so, and that would be a secondary effort.

You know, when I first came to Washington

many years ago, one common phrase that was heard in the area, in the telecommunications area and the broadcasting area, is that we said the spectrum belongs to the public. And then gradually, we stopped saying that. It was said very clearly by Commission staff and commissioners and including the Courts, but it's not mentioned very frequently now, and now when an emergency like this happens, we have to depend on the goodwill of those stations that want to do some of the efforts that you have made.

But it's a voluntary, a volunteer kind of thing, and whoever is helped is helped, and those that are not are not, and we need to make sure that we can reach everybody in these emergency situations.

That's my agenda in this Commission, and I would like to help develop an overall restoration of the relationship between the Commission and the public and the industry, so that all of our people are served. Thank you very much, Madame.

CHAIRPERSON VICTORY: Eduardo, thank you very much, and as I mentioned, we're just going to take a very quick ten-minute break and then come back for the introduction of our final group of panel members and their opening statements, and then we'll wrap up the meeting, so if I could ask everyone to be

prompt and be back in ten minutes, thank you.

(Whereupon, the above-entitled matter went off the record at 2:43 p.m. and resumed 2:56 p.m.)

CHAIRPERSON VICTORY: Okay, if I could ask the panel members to all take their seats, we'll get going again.

All right, continuing on with the introduction of our panel members and their opening statements, let me turn next to Billy Pitts, who is the President, Government Affairs, for Notification Technologies, Inc.

MR. PITTS: Thank you, Madame Chairwoman.

Our country's confrontation with natural disasters last year revealed with tragic clarity the need for the nation to raise emergency communications to a top priority.

I, too, want to commend Chairman Martin for creating this panel as an important first step in formulating a plan for achieving this crucial objective.

Our company, the NTI Group, Notification Technologies, Inc., specializes in providing a technological service that enables community leaders to reach large numbers of people within a narrow time frame with messages that arm them with critical

information before, during, and after unplanned incidences.

This new time-sensitive information, or TSN, technology, is a proven means of augmenting existing modes of emergency communications. TSN technology such as employed by us marries 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, or a standard email account.

The best thing about this technology, it does not require government officials to install new equipment or learn new technology. Once set up, all that an authorized user needs to record and send a message to an entire community or a pre-determined emergency operations team is access to a landline or cell phone and a user name and personal identification number.

Should the user wish to send his or her message to a special group, the user simply logs onto a password-protected account to select the recipients.

Calls are delivered by multiple carriers using multiple streams of delivery: standard phone lines, VIOP, email, etc. And phone numbers are stored in multiple, highly secured data centers to minimize

issues such as one region experiencing a power outage, hurricane flood, or some other type of damage that might make it impossible to deliver a call.

In this regard, TSN service providers represent a quantum leap forward form the older, auto-dialer systems. While those systems typically can take hours, if not days, to deliver large numbers of messages, TSN providers such as NTI have the capacity to originate hundreds of thousands of 30-second messages in a half and hour.

Further, good TSN providers utilize robust programming to monitor local telephone congestion, the last mile, throttling calls up or down, to help ensure that calls are delivered efficiently without overloading the system.

We also have the ability to record and send messages in multiple languages. A household that is designated as Spanish-speaking, for example, all messages will be sent to them in Spanish.

TSN systems such as those developed by NTI have interactive capabilities. They not only deliver messages, but they allow the recipients to communicate back to the sender. For example, the sending can inquire whether a recipient is in need of assistance, and the recipient, using his or her phone's touchtone

capability, can send an appropriate response, greatly facilitating relief efforts.

In addition, the system provides automatic reports regarding the success or failure of a call attempt, indicating whether the call has been received by a live person, an answering machine, or has gone unanswered or failed to go through due to network congestion, and I have provided you all with graphic representation of one of the Parishes in Louisiana.

TSN systems were dramatically demonstrated during last year's hurricanes. School systems in the areas affected by the storms used the NTI connect-ED system to deliver over 2,300,000 hurricane-focused message to members of the public.

Before and after Hurricane Katrina and Hurricane Rita, the East Baton Rouge Parish School District used NTI connect-ED system to send urgent messages to more than 34,000 phone numbers, multiple times, to inform family and police about the situation at the school.

After the storm 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 over 61,000 phone numbers pre-Hurricane Rita, an indication of the increase in contact information after the first storm.

I could give you numerous examples from school districts impacted by hurricanes, but the most pertinent to our discussions in this panel may be demonstrated by the techniques employed by St. Charles Parish School District.

In addition to sending out an evacuation message to over 21,000 phone numbers in advance of Hurricane Katrina, the communications director, Rochelle Cancienne, continued to use the system in the storm's aftermath to assist her parish's emergency operations center to better communicate with its citizens.

Working with our client care center frequently at 2:00 a.m., when she could get a call out over her own cell phone, she was able to provide guidance when the local news stations and radio stations were inoperable, help residents understand the extent and location of damage within the parish, reassure district employees, the largest employee base in the parish, that they would continue to be paid, regularly update constituents as to their progress

against the reconstruction schedule, and establish a special subgroup for ongoing communication with the additional parents that the school district took in just weeks after they were dislocated from other school districts in the greater New Orleans area.

Additionally, St. Charles Parish School District helped the parish's emergency operations center to monitor the capacity of the local telephone lines by constantly analyzing their call delivery reports, and I think I've provided you with that information.

The district saw call delivery success rates dip as low as 8 percent on August 29, but climbed back up to 28 percent just seven days later. Within a month, the district was back to a standard 80 percent plus success rate.

Ms. Cancienne told us afterwards that the system played a key role in holding the community together. As she noted prior to implementing the NTI connect-ED system, the school systems most effective means of mass communications was over a PA system at Friday night football games.

As a result of the lessons learned, St. Charles Parish Schools is now collecting data three times a year, rather than once a year in

October, to ensure that data is up-to-date. Additionally, the district is accepting relocation contact information so that they can communicate with staff and families who have evacuated, better assuring that they will receive the message when local telephone lines might be impacted within the parish itself.

In the future, the district would like us to work with the phone company to overlay data to determine where outages have been repaired. Our experience and that of our school system clients during the summer's hurricanes demonstrated the significant role that time-sensitive notification can play in all kinds of emergency situations.

Therefore, we have launched a new service, Connect CTY, tailored for use by smaller and mid-size municipalities.

I look forward to working with all of you and thank you again.

CHAIRPERSON VICTORY: Thank you very much, Billy. Let me turn next to Major Michael Sauter, the Commander of New Orleans Police Department's Office of Technology and Communications.

MAJOR SAUTER: Hello and thank you. I am Major Mike Sauter with the New Orleans Police

Department, and I know firsthand the effects of communications failure related to Hurricane Katrina.

And like some employees that you all mentioned, me being one of them, the day before the storm, I had a house, and still I have not found it.

During the storm and for the next week and many weeks after, but in particular during the storm the first week, I worked and lived in the Louisiana Superdome, keeping citizens safe and evacuating them, and we did, all the while not knowing where my family was, and they not knowing my status. Again, no communications.

Having said that, I'll talk about our status as a Police Department pre-Katrina, during Katrina, and post-Katrina.

Pre-Katrina, the City of New Orleans and the parishes of Jefferson, St. Bernard, and Plaquemines, had undertaken a project supported by a COPS grant to establish communications interoperability within the region. However, the project was 18 months from completion when Hurricane Katrina struck.

The project connected 17 local, state and federal agencies through ACU-1000 bridging technology. Direct console patches linked the Jefferson Parish

Sheriff's Office and the New Orleans Police Department. We were attempting to leverage all available federal and local funds to eliminate the number of disparate voice radio systems and upgrade others to improve day-to-day operability and built interoperability. However, the funding was not there to support the requirement.

During Katrina, the City of New Orleans lost two primary tower sites and had to evacuate the police and fire communication centers because of flooding. Associated with the loss of the communications centers was the loss of all 911 capabilities and the NOMIK interoperability bridging capability. Over 2,000 police, fire and EMS personnel were forced to communicate in a single-channel mode between radios utilizing three mutual-aid frequencies.

There was no voice radio contact with surrounding parishes or state and federal agencies. Lives were put at risk, and it created a direct operational impact on their ability to maintain control of the rapidly deteriorating situation within the city, carry out rescue efforts, and control the evacuation of those people who had failed to heed the call for evacuation.

Post-Katrina, today, we are working

diligently to restore voice radio communications, but it still has not been fully restored to pre-storm levels. Attempting to move toward regional and state-wide interoperability, the state has installed 700-megahertz antennas and repeaters. However, FEMA has denied funding for subscriber radios, which are needed in order to take advantage of the state architecture and tower sites.

FEMA has provided, as mentioned earlier, the St. Bernard and Plaquemines parishes with 700-megahertz subscriber radios, yet they cannot talk to the 800-megahertz system in New Orleans and Jefferson parishes, their region.

From an interoperability perspective, we are in worse shape today than we were before the storm. The storm has left the City of New Orleans and the parishes of St. Bernard and Plaquemines without funding. The parishes are unable to meet the cache match for the COPS grant, and will ask for a waiver to request -- for the requirement, but the overall value of the grant will be reduced 1,800,00, and this will further impact our ability towards interoperability.

FEMA funding for the COPS grants provides the only funding source for restoration of our communication systems and interoperability at this

time. Based on our regional plan, we are moving forward, but from an interoperability perspective, we will be less prepared for 2006 hurricane season, unless we receive immediate funding and support from outside sources.

CHAIRPERSON VICTORY: Thank you very much. Let me turn next to Marion Scott, Vice President of Operations of CenturyTel.

MS. SCOTT: Thank you, Nancy. I've been very impressed with the enthusiasm, the passion, and the knowledge of the folks who sit with me on this team, and I'm very, very proud to be a member of the team with folks like you. I think together, we'll be able to get some good things done.

CenturyTel is a full-service communications company, and is the eighth largest local exchange carrier in the United States, based on access lines served. We have around 2,500,000 geographically clustered access lines in 26 states. We also operate an affiliate, LightCore, which includes a fiber network of nearly 14,500 route miles. Approximately 72 percent of that is lit, and it provides increased control of the company's transport needs in much of its central U.S. service. It's kind of like an expanded Louisiana Purchase area covered by

that affiliate.

In 2005, the company acquired approximately half of CLEC and fiber assets of KMC Telecom, which gave us access to fiber rings and customers in 16 Tier Two markets, so we have a CLEC arm of our company, as well.

In the southern region, CenturyTel has about 700,00 access lines. Katrina impacted about 100,000 of those, and if you put Katrina and Rita together, about 24 percent of our access lines were impacted by the storms.

We had all local telephone service restored within a few days of the event, and I'm going to caveat that by saying where homes still existed, and Michael, I'm very sorry for your loss.

But we did find that other services that depended on the infrastructure that a lot of smaller and local telephone companies depend on, was impacted for four to six weeks, such as 800 service, a lot of people were getting all circuits busy and that kind of thing.

And then, of course, dependence on power restoration required prolonged alternate power source activity, primarily using generators, and that continued for some time after the initial restorations

were completed.

Being from Louisiana like some of you are, we use geographic-based words to describe our issues, and I'm going to refer to the bad stuff as "gators." So what were our biggest gators? One was the dependence on and vulnerability around utility infrastructure owners or providers for restoral and for information regarding restoral. Second was fuel, then there was security, and of course food and housing for workers.

I want to take this opportunity now, though, to thank members of the FCC who stayed in touch with us. Roger Woock and Tom Navin were our contacts. They were in touch with us very soon after the beginning of the event, and stayed in constant contact with us throughout, providing support for things like fuel, access, and security.

We had a restoration plan pretty well in hand and did secure our own fuel sources in North Monroe, Louisiana; Farmersville, Louisiana; and some parts of Texas, and took tankers into the area ourselves. But we did appreciate the concern and the follow-up efforts of those individuals from the FCC and Nancy, I hope you'll give them our regard, because we know that besides Tom and Roger, there are an awful

lot of people working very long hours, always there.

So back to the gators. From a service restoration standpoint, during Rita and Katrina, we along with other smaller telcos that we talked to felt that we were sort of on our own as far as coordinating, getting things fixed, and trying to figure out what the next steps were.

We accomplished service restoration either by ourselves, if we controlled the infrastructure, or through, unfortunately, relationships with our carrier partners, and because we didn't have a structured organization to go to for things like restoral and information, we relied on back-door contacts with a lot of the companies with whom we do business and frankly, the better the relationship, the better our opportunities were for quick restoral.

There was no formal or consolidated intercompany process or a single or regional liaison to rely on. Our biggest issues included dependence on and therefore vulnerability with these other network providers, such as the tandems in New Orleans.

Briefly, CenturyTel customers couldn't call into New Orleans or to any of the offices that subtended off of those tandems, and of course this raised a lot of concerns as people tried to get

information about friends, relatives, status of property, and so on, including some emergency service problems that arose.

Additionally, once traffic began to move away from those tandems onto other switches, which it had to do, then some additional congestion arose and we experienced some all-circuits-busy conditions, as most of you probably also did when trying to either call in to the Louisiana area or, in some cases, out of the Louisiana area.

That continued for a full four to six weeks afterwards, and there are still some intermittent problems that arise. We've transferred like 911 trunks and some 800 number services with the cooperation of our partners, but we're still experiencing a few of those kinds of things as they come to light for us.

Fuel was not available in the local areas. Our resources were secured in Texas and north Louisiana. We rented tanker trucks to haul the fuel to the impacted areas, and then the drivers were concerned about their safety going into the areas where we needed to have the fuel, and so we had to arrange for police escorts, thank you Mr. Booth, and we also hired some security on our own, as many

companies did.

Because of the widespread power outages, we deployed scores and scores of small generators. Now, we had stand-alone generators at our larger sites, but we had to rely on the smaller generators for the more rural locations, and we are rural, so that was a big deal for us, and of course, keeping those fueled was a problem for a long time afterwards, and even though they were secured with lock and chain, over a dozen of them were stolen.

So it took down friends and neighbors, but desperate people do desperate things, and I don't know what I would do in those circumstances. I just need to call it out, that the security of a facility is to help the greater whole needs to have more importance placed on it by us and by others, we hope.

Housing and food were a serious concerns, and each group was kind of on their own to find lodging and showers and food for exhausted workers. In some cases, we did use our generators to power restaurants and hotels and went to sort of the old barter system. We'll give you power, you give us a shower. So it was power for showers, and they also provided food for us in that arrangement.

We resorted to renting some motor homes,

house six people and feed folks out of those in the very rural areas.

So that's enough about the gators. I'd like to move on to something a little more constructive, I hope, and although we all feel that practice makes perfect, this is the kind of practice we absolutely do not want to have, so hopefully, we're well prepared next time, and tell whoever's in charge that we don't need any more practice.

Much of the post-hurricane attention has been directed at restoring New Orleans, and we completely support those efforts. We do, though, for the sake of the task force, want to indicate that CenturyTel's focus, of course, lies in the more rural areas, in the risks and the opportunities around those areas. There are smaller towns and rural homes that suffered the same devastating losses, except on a smaller scale, but have received much less attention and focus.

On the opportunity side for all of us, the importance of and need for dispersed functions and diversity that rural communities can provide became hugely apparent. According to the Center to Bridge the Digital Divide, as high-speed data connections become increasingly available in rural communities,

more business owners are recognizing that these smaller communities can provide potential solutions to business continuity challenges.

Businesses are looking to rural regions to host backup data storage and the sites to disperse critical business information support functions for a variety of reasons, most important of which are cost-effectiveness, availability of workers, and security.

Kathy Brittain White, President and Founder of Rural Sourcing, Inc., estimates her company can provide quality information services from rural areas at a savings of 30 to 50 percent compared to urban areas.

Also, employees with a strong with a strong work ethic and low turnover rates, which are characteristic of a rural workforce, can reduce training and recruitment costs, according to Washington State University's case studies around bridging the digital divide.

Therefore, ensuring our rural communities have adequate voice and data services available, even in times of disaster, may help keep businesses operating and families intact through the duration of such disasters.

However, we most certainly realize that no

communications network could be expected to remain fully operational during a Category 4 or 5 hurricane, such as we saw.

CenturyTel would like to make the following recommendations for consideration. Recovery effort assistance. We suggest that each state appoint a dedicated regional communications liaison to coordinate recovery efforts and restoration status. They would work in conjunction with the FCC bureau proposed by Chairman Martin to better coordinate planning and response efforts for their state or region. This liaison would assist with restoration opportunities, having a holistic and coordinated view of the entire communications infrastructure within their state or region, as well as some authority to facilitate company-to-company emergency cooperation.

The advantage would be that rather than relying on personal relationships or figuring it out for ourselves, the liaison would be aware of general capacity and routing opportunities, and would coordinate the dialogue. That oversight could include mandatory network access. Available networks should be made available, ad hoc, to those in need, with a mechanism for guaranteeing payment precluding having signed contracts.

Also, possibly provide a stipend or a tax incentive in high-risk areas for carriers to either carry excess capacity, or for redundancy.

During Katrina restoration efforts, we were in contact with some carriers who actually had excess capacity, but because of an internally established cap, the capacity use was refused, and that furthered what we felt were unnecessary delays.

Establishing a priority list for providing limited restoration-directed fuel resources to public utilities and emergency services is in our proposal. The plan should address how the fuel is made available, including security and location. It should also address the ability to haul fuel between locations, to pump, load, unload diesel and gasoline.

Shelter and food. Emergency utility workers face a grueling task, often with no time to sleep or access to food to sustain them during what can be long hours, days, and even weeks of hard and dangerous work. Establishing emergency shelters within disaster areas, with priority for emergency and critical relief services, would most certainly have been helpful in Katrina to many of us who provide labor in those areas.

Security. During Katrina restoration

efforts, independent groups were forced to hire their own security for materials, fuel, and so on. We suggest that the National Guard arrive and immediately set up pre-arranged safe zones for staging.

And infrastructure. Conduct a tandem and network review to make recommendations for survivability. The eye should be toward a high-level infrastructure view versus at a single-company level. Who was it, Sheriff Beary, was it you said "Check your egos at the door" sort of a thing. You know, let's look at this from the higher point on the mountain.

And then tax incentives. We ask that the FCC suggest to Congress that all businesses that invest in the Gulf Coast regions, including telecommunications companies, be given some tax relief to encourage rebuilding and the creation of jobs. The FCC should show their support for those tax relief efforts discussed at the Senate Finance Committee's October, 2005 hearing on tax policy for disasters, which included double-expensing for investments in new equipment, bonus depreciation, priority to Gulf Coast applicants for tax credits, and tax reliefs for the building of new structures in disaster regions.

It's up to us, we on the panel, to keep

the momentum that Chairman Martin has started, and we can do that. CenturyTel appreciates the opportunity to serve on this panel and to bring a rural perspective to these proceedings. Thank you.

CHAIRPERSON VICTORY: Thanks, Marion. Let me turn next to Kay Sears, Senior Vice President of Sales and Marketing for G2 Satellite Solutions.

MS. SEARS: Thank you. G2 Satellite Solutions is the government services provider of PanAmSat, a global satellite operator. As a representative of the satellite industry, I would like to thank the FCC and Chairman Martin for taking a leadership role in finding solutions to improve disaster preparedness, network reliability, and communication among first responders.

Satellite communications played a critical role in Hurricane Katrina and it's aftermath. When the telephone and broadcast networks went down, satellites remained alive, connecting emergency personnel and other first responders. Satellites enabled the world to witness the disaster and also the many acts of heroism.

Although the performance of satellite systems was impressive, their use was limited by the lack of preparation. Had satellite systems been more

effectively integrated into our emergency communication networks, many of the communication problems that occurred in Alabama, Louisiana, and Mississippi would have been substantially mitigated. As the FCC Chairman Martin recently stated, "If we learned anything from Hurricane Katrina, it is that we cannot rely solely on terrestrial communications."

The satellite industry and our satellite network infrastructure were not as affected by Hurricane Katrina. This is partially because satellites orbit high above the problems on the ground. In the hours, days, and weeks following these disasters, satellite networks provided critical communications capability to emergency personnel, and a vital information link for citizens, whether via satellite radio, satellite television, or via fixed satellite networks or mobile satellite telephony.

One aspect of our satellite communications network that can be impacted by hurricanes and natural disaster is the ground equipment, V-SATs and antenna infrastructure. To this degree, these antennas can be damaged or blown off point and required readjusting to reacquire the satellite network.

In addition to the degree that power outages occur with these disasters, like all other

equipment, satellite equipment requires generators.

In large part, however, while the outages on terrestrial networks surged in the days following Katrina, satellite networks were handling a corresponding surge in demand for capacity. Our satellite voice, video, and data networks performed exactly as they were designed to perform, providing reliability and redundant communications solutions in times of crisis.

From transportable ATM machines to high-speed internet access for families to stay connected, the organizations using these satellite communications range from federal, state, and local government agencies to schools, churches, and local relief organizations. Small business, such as retail gas stations and convenience stores, and larger businesses, such as insurance companies, financial institutions, and news organizations, all use satellite capacity.

For example, Hughes Network Systems immediately reestablished Wal-Mart's satellite communications network, helping Wal-Mart become one of the life-support systems for local communities during their recovery.

Intelsat reconfigured capacity and donated

service to help cellular providers such as Cingular and Nextel Sprint, and long distance carriers MCI and AT&T, reestablish their networks, as well as provide capacity for emergency services via mobile vans for relief agencies and mobile offices and command centers for the DHS and FEMA.

PanAmSat donated satellite capacity to the Red Cross to provide communications to about 40 of their sites, and deployed inflatable antennas to the Red Cross Center in Biloxi, used by evacuees to send email messages to the family.

PanAmSat also supported FEMA's fleet of first responder trucks and MCI's Big Blue, to provide VOIP and data connectivity. SES Americom donated satellite capacity to enable high-speed ship-to-shore communications for the U.S.S. Iwo Jima, which carried disaster relief teams to New Orleans with amphibious construction equipment and medical personnel and supplies.

Both XM Satellite Radio and DirectTV provided FEMA and the Red Cross with a 24/7 dedicated broadcast station for disseminating hurricane-related information. Following the storm, XM launched a new channel called Red Cross Radio, Channel 248, which provides information directly to Red Cross workers

located in the Gulf Coast, as well as Red Cross aid stations.

Despite the tremendous contribution of the satellite industry to the rescue and recovery efforts in the gulf region, barriers existed which prevented the full use of satellite resources. To enable rapid deployment and/or restoration and truly mobile communications, federal and state governments should incorporate satellite services and networks as a redundancy requirement in any communications network or architecture, and these resources should be pre-deployed.

These solutions include satellite telephones, satellite bandwidth, as well as V-SAT networks, The problem in the aftermath was the availability of equipment and bandwidth to satisfy demands. Satellite phones became very difficult to find, despite 20,000 being shipped in the days after. Hundreds of additional satellite requests went unmet.

V-SAT equipment, in the quantities requested, was also nearly impossible to obtain, let alone ensure the timely importation or delivery to isolated areas.

Satellite handsets and small modern popup antennas and satellite phones could have been pre-

positioned onsite prior to Katrina and available for immediate deployment in the aftermath. In the hands of first responders, this technology could have provided the communications necessary to deploy safety-of-life services to those who needed it, without delay.

The military's war on terror in Iraq and Afghanistan operates almost exclusively utilizing these types of satellite communications services, because there is no terrestrial network, and there is no ubiquitous cellular network, either.

These products work today. They provide redundancy today. They work with other communications today. As such, the panel needs to facilitate a wider pre-position deployment of these assets today, by ensuring that satellite capacity and equipment become part of the comprehensive redundant communications solution used by first responders during the planning stages, rather than at the last minute.

The satellite industry has four specific recommendations for the panel to consider. Satellite should be an essential component of future critical communication networks. Satellite capacity and equipment should be pre-positioned and pre-purchased. Satellite operators and personnel must be

credentialed as first responders, and satellite spectrum must be preserved and protected from interference.

We in the satellite industry are justifiably proud at the crucial part we have played in disaster recovery efforts by providing vital communications to relief workers, government agencies, churches, families, and journalist. However, we have also been very frustrated by the knowledge that we could have done much more.

On behalf of the industry, I urge the panel to take steps to ensure that satellite systems are completely integrated into emergency planning and preparation, so that the unique benefits our services offer can be fully exploited the next time there is a disaster.

Thank you, Madame Chairman, for the opportunity to participate on this panel.

CHAIRPERSON VICTORY: Thank you, Kay. Let me turn next to Ted Sexton, President of the National Sheriff's Association.

MR. SEXTON: Thank you, Madame Chairman. On everybody's behalf, I'm going to dispense with my written statement, make a few comments, and move on, since we're on the final stretch.

It's an honor to serve on this panel. I appreciate the opportunity to serve with all of you, and I thank you for everything that you brought to this table, especially what you did during Katrina.

There's a few comments that I would like to make, though. There is little doubt about the importance of what we're doing here, not only is the nation studying us, but unfortunately, Al-Qaeda and other organizations studied our response to Hurricane Katrina, and we need to do a better job. I think that's something that is rather established here.

It has been interesting to me, today, as I listen to everyone here, about what was done and how we did it. We're forgetting about the hectic, chaotic, almost ravenous, ravaged pace that everything was going. We weren't sitting around in an environment like we were today, with one of the most hectic, chaotic, life-threatening environments that I, myself, have ever been in, and it was a seven-week experience between Rita and Katrina that I will never forget.

As I listen to how well things came back and what everybody did, there's some things that I remember about being in the New Orleans area. My radio didn't work. My cell phone didn't work, and we

were having difficulties. As I listen to some of these things, I guess I was in bad services areas, or I was in areas where I didn't jump on the interoperability system. They were there, but not everybody had the availability of getting to them, and then the area that we were assigned to in Grand Isle, we just put up our, when we got assigned Grand Isle, we just put up our own radio system and we communicated that way.

I had a conversation via a cell phone with a Sheriff in Louisiana while I was in Tuscaloosa, and he was telling me about the situation, the lawlessness that a Sheriff's deputy had been shot in the head, and I also had a conversation with a Sheriff in Mississippi via the SouthernLINC Wireless system, that told me about the problems that he was having. Immediately, the National Sheriffs' Association worked through the existing EMAC system to get some 1,500 Sheriffs' deputies into Mississippi and Louisiana.

My home state of Alabama was hit, but thanks to prior planning and folks like Chief Stephen Dean, the redundant communication systems that we had there basically worked. Again, the link system filled a giant void for us in a private government function. I thank you for all that you all did for us in the

State of Alabama.

However, in regards to things that I saw in Mississippi and Louisiana, I saw some of the worst in people and I saw some of the best in people, but generally, the American spirit came through, and we worked together to work our way through problems.

Can we do a better job? I don't think there's anybody here that says that we can't, and that's the important thing.

We're not bringing to the table a list of recommendations. I hope those recommendations that we consider are made at the end, after all of us have the opportunity to review. The only thing that the National Sheriffs' Association and Sheriffs I've talked to in general would like to do is hopefully, we review some of the existing standards that we have to see if they truly meet our needs.

We've had standards that have been talked about here, from P25 to what you need to be able to move one radio station over to another. So hopefully, these are things that we look at to see how we truly operate in an emergency or catastrophic situation.

And then lastly, Kevin and I are both elected officials, and there's an awful lot of other elected officials that have a responsibility for the

quality of life and the personal safety of various persons, and if we do not come together -- the young lady from NAACP talked about this coming hurricane season. We're supposed to have another active hurricane season. History repeats itself and unfortunately, it looks like we're going to repeat ourselves with the hurricane season, but folks have a tendency at the ballot box to voice their displeasure, and if we as elected officials don't do a better job, then I'm afraid that we will see persons vote to show their displeasure.

So there's a number of things on the table here, and as an elected official trying to do the best that I can for my community, as well as President of the National Sheriffs' Association, we're honored to be here and thank you so very much.

CHAIRPERSON VICTORY: Thanks a lot, Ted. Let me turn next to Chief Edwin Smith, who is the Chief of the Baton Rouge Fire Department.

CHIEF SMITH: Thank you, Madame Chairman, for the opportunity to serve on this panel. Colonel Booth gave an excellent presentation on the many issues that we faced in the state.

Focusing on the local issues, during the initial days of the storm, Baton Rouge communications,

though taxed, was not overloaded. Our communications division never lost radio or telephone communications. Due to the fact that the eye of Katrina passed to the east of Baton Rouge, it brought heavy rains, but not the anticipated hurricane-force winds. Total infrastructure was not damaged, and all local transmissions were handled.

However, early on, it was obvious that the normal coverage are of the Baton Rouge Fire Department was going to be expanded by hundreds of miles, and it was obvious one of the first critical hurdles we would have to face was the lack of communications with other agencies and jurisdictions.

There were some areas that we were surprised that we could communicate, and some areas we were depending on that just did not work. Some of the communication areas that broke down were (1) cell phones became unreliable because of damage to towers and the increase in call volume; (2) landlines were all but destroyed due to the damage of poles and lines in the area; (3) radio infrastructure such as repeater towers in the affected areas were destroyed. This rendered the local systems inoperable, and the ACU-1000s that we patch our radios into, their systems became useless. The common 800-megahertz channels

ICAL and ITAC were overcome and overwhelmed, as they were the only way to communicate, via radio, with other agencies. Satellite telephones that were acquired were unreliable due to the overwhelming number of phones brought into the area.

A search and rescue team actually had to borrow a phone from a news outlet to get enforcement messages out.

There were some communications areas that did seem to deliver some reliability. Emails and text messages sent to cell phones and Blackberrys. We are not sure why this worked, but on several occasions, we passed necessary information into and out of the affected areas by this means.

Direct talk-to-talk channels on our existing radios. This worked in the immediate areas. Without having to rely on repeaters and radios, communications realizing this is not effective for large-scale communications, but is definitely the best way for our responders to communicate within their tactical positions.

The Governor, through the State Police, had a working committee on communications prior to the storm. One of their tasks was to look into creating a state-wide communications backbone, to allow various

agencies to use their equipment during emergencies.

This system would greatly enhance our interoperability, as long as there was also a way to temporarily establish towers in the areas where they had been destroyed.

I am looking forward to working with this panel in the future. Thank you.

CHAIRPERSON VICTORY: Thank you very much. We turn next to Bill Smith, who is the Chief Technology Officer of BellSouth Corporation.

MR. SMITH: Thank you, Nancy. I, too, am honored to be a part of this panel, and look forward to working with all the panel members.

As many of the other members of this panel, given the territory that we serve, we seem to get more than our fair share of experience with hurricanes, whether it's Andrew or Hugo or Ivan or many of the other names that you heard today, and we feel like we've got a lot of experience, and have practiced those techniques pretty well, but we'll have to tell you that Hurricane Katrina had us writing new chapters for our playbook in that regard.

We generally start with three phases: preparation, monitoring, and restoration. And as many of you have mentioned, we actually started tracking

this storm when it was Tropical Depression 12, located over the Bahamas. We actually started staging material, we managed the landfall in Florida, we moved material again to the gulf region.

We had what we call BellSouth tent cities that we learned to house our employees, particularly our employees and their families, when they've lost their homes. We had about 1,000 generators that we were moving, 25 tankers of fuel. At the height of the process, we were serving over 8,000 meals a day to our employees, and we were, as many of you have mentioned, we were having fuel convoys coming and out of downtown New Orleans. In fact, we were inviting several other members of the industry to join into our armed fuel convoys. We had private security at the front and at the rear of those convoys, and many other carriers took us up on that.

However, I said earlier that Hurricane Katrina was unlike any that we'd ever seen, and I think it varied in significant ways. The Florida hurricane was very familiar to us and what we had seen in the past.

The gulf region outside of New Orleans proper was devastating, and the storm surge that we had seen there that was measured anywhere from 35 to

40 feet was certainly unprecedented, but the water receded and we started working immediately to restore there, albeit with massive damage.

What was unique to us, I think, was what we saw in New Orleans proper, in the fact that the waters didn't recede, and I will tell you, it's a very frustrating thing to sit and watch a generator that may have 4,000 or 5,000 gallons of fuel, watch that generator run out of fuel and not be able to get access into it because there's six or eight feet of water all around. And unfortunately, the size of some of these facilities required thousands of gallons of fuel. In some cases, we have as many as 25,000 gallons of fuel on site, so it's not a small operation.

But we started working with prioritization to make sure that we focused first on emergency response, E911, hospitals, and then immediately going to priority circuits. We worked very closely with the wireless industry, and I think this was the first time this had ever been done, but we actually, in preparation for the storm, invited many of the wireless carriers in the area to come in to our emergency control center in Atlanta and help us, because obviously, when you've got a cell tower that

may have four or five companies on it versus a tower with only one company, in the interest of the industry and the interest of the public, it's better to get the most coverage back the quickest.

So that worked very well, and we had several members of the industry in our emergency control center. We actually had two calls, daily, one with inter-exchange carriers and one with the wireless carriers, and that seemed to work very well for us.

But I think it's important that we remember in this emerging dynamic day of telecommunications, where we have email and IM and text-paging and VOIP and all these other things, we need to remember that basically, most of those do still, in fact, run on network infrastructure of some sort, and those are pretty expensive to take care of.

In fact, we now believe that the cost of our restoration of our network will be between $700,000,000 and $900,000,000 as a result of Katrina. Now let me put that in perspective. Before, hurricanes that we went through in the 2004 hurricane season, cost a grand total of about $200,000,000. So this one hurricane will be at least four times as costly to restore as those hurricanes were, combined.

So let me just focus on some of the things

that we think are lessons learned to go forward, and I'll be extremely brief, because many of these have already been touched on.

First of all is reliance on commercial power. We found even new areas, people that were accustomed to using their cars to charge their cell phone battery, couldn't do that this time if their car was under five feet of water, so commercial power is still a primary concern for us, even with all the generators deploy, then getting access into those for fuel.

Secondly, we think looking at mulplie scenarios for E911 center, failover for the PSAPs, is helpful because as we saw in this particular case, even though backup plans were in place to fail over to adjacent facilities, the damage was so widespread that those plans didn't help, and it reminded me of the learnings of the financial industry after September 11, where they wound up deciding that they needed to have backup data centers on the order of 200 miles from one another, because they learned that backup data centers that were too close to one another geographically were affected by the same event.

Third, we've already -- many of you have mentioned the common radio frequency and radio

equipment, and I won't go into that in any more detail, but we support that.

Fourth, we learned that raising our equipment above flood-prone areas helped a lot. As a result of lessons that many of my predecessors learned from Hurricane Betsy in New Orleans many, many years ago, most of our equipment was on the second floor or higher in the buildings. That saved the equipment from being destroyed by flooding. It didn't help us get fuel into it, but it still made the recovery period much, much quicker.

Unfortunately, many of the coastal areas, like Lake Catherine, for example, there's nothing left of that building but the pilings that the building was built on. We had thought we had done everything we could do, including building those buildings up on pilings and taking steps to harden them, but even that was not sufficient for this storm.

Fifth, we've talked about first responder designation. We had situations where even our technicians were pulled off of splicing restoration because of curfews and things of that nature, so I think there's a lot we can do there. That, obviously, may involve things like Stafford Act amendments and so forth, but we think they're very critical.

Next, I'd like to say the supply chain of our industry, I think, was taxed. While I can't say that we had restoration completely delayed, I think we came very close, and this goes from everything from high-tech equipment such as fiber optic systems, etc, to things as basic as utility poles.

Most estimates say that we los about 120,000 utility poles in this country a year, and by our estimate, about 100,000 were damaged by the 2005 hurricane season, so that one series of events basically used as many utility poles as the entire season typically takes.

Seventh, we established a hazardous materials team a couple of years ago, and that was very effective for us going in and recovering some of our buildings, so we think that that worked well and would encourage that going forward.

Eighth, I think the FCC Network Reliability and Interoperability Council, NRIC, which the NRIC 7 has closed. NRIC 8 has not yet been chartered, but one of the recommendations I would have, much like another one that was recently made, is that we go back and look at those best practices, because all of us, I think, learned new things to do from this event, and I think we could go back and look

at our best practices, particularly in things like facility protection, because as my colleague from Cox mentioned, getting through the event is one thing, but as quickly as we could get some of these fiber optic systems restored, someone would damage them, inadvertently, but damage them nevertheless.

Finally, we think that this was really unprecedented industry cooperation, and we'd like to see that model go forward as we decide how we can improve in the future. Thank you.

CHAIRPERSON VICTORY: Thanks very much, Bill. And last but not least, Patrick Yoes, who is a Caption with the Special Services Division and the Commander of Public Information and President of the Louisiana Fraternal Order of Police.

CAPTAIN YOES: I'm the only everybody's been waiting for to speak.

CHAIRPERSON VICTORY: That's right.

CAPTAIN YOES: Thank you, Madame Chairman. My name is Patrick Yoes. I am the National Secretary of the Fraternal Order of Police, and also the Louisiana State Lodge President and we, too, would like to commend the FCC Commission and Chairman Martin for allowing us to be part of this diverse panel, and really look forward to the opportunity of improving on

our nation's response to major incidents.

Representing 322,000 active and retired law enforcement officers nationwide, the Fraternal Order of Police has reached out to our members in Louisiana, Alabama, and Mississippi for their constructive input on this endeavor. The Louisiana Sheriffs' Association also provided valuable insight.

My comments are not meant to be critical of any agency or response. Rather, they are offered as an explanation of varied challenges that should be addressed before our response system is tested again.

These comments come from my own observations, having responded for assistance throughout southeast Louisiana, through communications with my colleagues, with public safety agencies, and also with agencies who responded to assist in the wake of Katrina.

The days that followed Hurricane Katrina set the stage for countless nightmares, unbelievable challenges, and tributes to courage, bravery, and perseverance. While there were numerous stories of accounts of bravery in such trying times, Hurricane Katrina was a vivid reminder of the impact and the inability of being able to effective communicate and coordinate. Hurricane Katrina brought with her

challenges that tested every aspect of the emergency services.

A positive overcome and adapt attitude adopted by first responders should be commended. Many first responders lost their homes, and most had major damages. Yet despite their personal crisis and uncertain future, they remained on the job, rescuing, providing emergency services, and reestablishing a sense of order in a ravaged area.

Within hours of the storm, vast areas of the affected region had no regular telephone or wireless service. Thousands of switches and cell towers, which formed the regions networks and telecommunication network, were destroyed, inaccessible, or left without power.

Nextel Direct Connect services did provide limited communications for a period of time in the early days, during rescue operations. For the most part, emergency responders were forced to stay in touch with each other with any means possible, and for most agencies, the means of communication for the first week was through personal courier, and even that proved impractical with the level of devastation and flooding that hampered the region.

With no communication network, although no

communication network could be expected to remain fully operational in such extreme conditions, the inability to communicate only complicated the early challenges facing first responders. Even though the state system lost multiple sites, that remained viable and provided functionality in the New Orleans area, as Colonel Booth had mentioned, but was significantly overwhelmed by the amount of emergency traffic placed on it.

One of the four designated mutual aid channels was functional and was being shared by the New Orleans Police Department, Jefferson Parish Sheriff's Department, Port of New Orleans Harbor Police, Fire Departments, and EMS. It was difficult at best, if not impossible, to communicate under those conditions.

Clearly, there was a lack of pre-planning before Hurricane Katrina made landfall, at all levels. It is apparent that major portion of resources at a state and national level were focused on a New Orleans area where the demands were, certainly, tremendous. However, the demands of New Orleans overshadowed the need of many affected jurisdictions that were equally vulnerable.

In areas like Plaquemines Parish, south of

the City of New Orleans, it was a National Sheriffs' Association, or Louisiana Sheriffs' Association, not FEMA or state agencies, who responded with vital assistance. Other agencies experienced the same.

In the case of Plaquemines, it was very difficult to call for help when you had no way of communicating. It's something we seriously need to look at. There must be a measured response throughout the entire affected area, within hours, when it's needed the most.

I'd like to offer a couple of recommendations, and certainly, this is not a complete list, and I am cutting this down some, and I have a written report that has more in it. Certainly, we must find -- public safety network must -- and facilities must be built and maintained to withstand worst-case scenarios. Operability is more important than interoperability.

And in this case, the benchmark has been changed. Katrina has certainly changed that. Interoperability, as long as it's -- as we have not addressed it and implemented, the potential for communication crisis will also plague first responders.

Greater emphasis should be placed on the

assignment of portable communications equipment available for rapid response in the critical hours following a major event. I, too, am very pleased to hear all of the resources that were available after the storm, but I can tell you my experiences were in the initial hours. When we needed them the most, it was very difficult to find any way to communicate.

Develop training that is aimed to improve communications during disasters. It may seem simple, but it certainly -- there's a lot of value in that. Some simple features are probably lost in the translation of a period time. I'm not really using them, and well worth looking into, and create a program where technicians working to restore the communication system can be credentialed so they can have easier access to areas.

In conclusion, while there were many public safety breakdowns, both in planning and infrastructure in the gulf coast region, a shining example of the efficiency and a substantive response during Hurricane Katrina was the local law enforcement.

Local law enforcement rose to the challenge without the inherent governmental inertia that plagues other entities. Certainly, the magnitude

of Katrina placed greater demands on -- than we have ever experienced before. However, local first responders regularly respond decisively and are in a better position to move forward.

In a post-Katrina world, planning, preparation and response, as it relates to significant events and disasters, must include a local law enforcement perspective, and local enforcement must play a significant role in driving that initiative.

The fundamental argument for this point is that local law enforcement was there during the first week, dealing with rescues, lawlessness, and supply in affected areas, and they did so in an almost non-existent communication environment.

Again, I'm honored to participate in this panel, and we're excited at the opportunity of improving the communication capability of America's first responders. It will be the lessons we learn through Katrina that will make our nation much stronger.

CHAIRPERSON VICTORY: Thanks, Patrick, and thanks to all of you for your opening statements today. I know there was a lot to listen to, but I thought it was important, as we start this endeavor, that we have an opportunity, up front, to exchange

experiences and exchange perspectives, because I think now all of the panel members kind of know where each one is coming from, what experiences they've had, and I think we've also teed up a number of important issues for further exploration, as the panel gets going, as the working group gets going, and so I think that that was a very, very helpful exchange of information.

The remarks here today were brief. I know many of you have submitted longer written statements or reports, which will be publicly available on the website, and which I will make sure Lisa circulates by email to all of you. I would urge you, particularly, to take the time to leaf through them and to really read in detail some of the critical sections, particularly if they pertain to some of the working groups you're going to be participating on, because I would imagine, and I know from having looked at some of them, that there's a lot of detail in those reports -- I'm getting some feedback.

Also, we've started to receive, already, some written submissions from interested members of the public. We are also going to begin to circulate those to all of the panel members this week. Those are also going to be made available on the website, as

well.

As we circulate those, it may be that Lisa or I will indicate that there might be a special relevance to a particular working group and highlight some written comments for a particular working group, although as panel members, I would urge you to try to keep up with all of these and read all of these, because they will be germane to the recommendations that we are going to be making in June.

Our next meeting is going to be scheduled for early March. We're currently working with the Chairman's Office to select the dates and a venue, but we're targeting the first and second weeks of March for those. I figure we're looking at a two-day meeting, where we would be taking -- having the opportunity for oral testimony from interested parties, so keep in mind that that's when we're looking for this.

We're also trying to hold this at a venue outside of Washington, D.C., and we're working with the Chairman's Office to have that location identified.

I will certainly alert you and will also put a public notice out as soon as we have that information. Hopefully, we'll have that fairly

shortly.

Now in the meantime, the working groups will need to get going. I announced today the chairs and the vice-chairs of the working groups, and would appreciate your feedback, particularly on the working groups that you want to participate in, knowing of course we do need to keep these to a small group, but we want to make sure that there's a diversity of viewpoint on them.

I've already sent out to you a description of the working groups, and some of the issues that they may be focused on, and I urge you to take a look at that and let me know, particularly if there's a second group that you might want to participate in.

I'm going to discourage the chairs and the vice-chairs from taking on a second one, because I think you're going to have a lot of work managing your groups, but for those who are participants who have particular interest in more than one group, I encourage you to let me know of those interests and let me know of you time, availability, and energy, and I would be delighted, because I would like to try to get all of these working groups up in the neighborhood of about 12 participants, so that we really do have a diverse group of viewpoints there.

With respect to the working groups, as I've already chatted with some of the chairs and the vice-chairs, I've encouraged them to work with me to try to call a meeting fairly shortly, perhaps as early as next week. These will necessarily be by conference call, because everybody is dispersed, but I would imagine that the working groups will all try to have face-to-face meetings, either before or after our next full committee meeting. Perhaps after might be a good time, because you'll have an opportunity to digest and discuss some of the oral testimony that you'll hear, and it may give you an opportunity to do some issue-spotting and some focus.

But one of the things I would direct the working groups to do during the month of February is to process what you heard today, take a look at the more extensive written submissions from the panel members, take a look at the written submissions we may have received so far, and think a little bit about what are the issues that issues that we need to get more information on and in particular, if there are areas not represented on the panel that you would like to particularly hear from at our next meeting, in terms of oral testimony.

If there's an expert or a type of company

or a type of service provider or a type of manufacturer that you want to hear from and get some additional detail on, let us know that, because we do have the opportunity for this next meeting to ask people to come and testify, as well as just sitting back and waiting for folks to volunteer.

So as you're starting to do some issue spotting and you want more information, think about who you want that from and let me know, and that's something that Lisa and I will work on.

At this point, we have pretty much run through our agenda, unless anybody has any questions.

Okay, well I think I will let you know when the next meeting will take place. I'm sure you'll be hearing from the working group chairs and vice-chairs. We have a lot of work to do in the next, actually less than five months, so I appreciate all the detailed comments today. I appreciate your attention, and I look forward to working with all of you as we proceed full speed ahead. Thank you very much. We're adjourned.

(Whereupon, the above-entitled matter was adjourned at 4:02 p.m.)