

1

2

3

THE FCC INDEPENDENT PANEL REVIEWING THE IMPACT  
OF HURRICANE KATRINA ON COMMUNICATIONS NETWORKS

5 Lisa M. Fowlkes, Designated Federal Officer

6 Jean Ann Collins, Alternate Designated  
Federal Officer

7

8 Chair

9 Nancy J. Victory  
Wiley Rein & Fielding LLP

10

11 Members

12 Carson Agnew  
Executive Vice President  
13 Mobile Satellite Ventures, LP

14 Michael Anderson  
Chairman  
15 PART-15.ORG

16 Robert G. (Gil) Bailey, ENP  
Telecommunications Manager  
17 Harrison County Emergency Communications Commission

18 Kevin Beary  
Sheriff  
19 Orange County Police Department

20 Greg Bickett  
Vice President/Regional Manager  
21 Cox Communications

22 Lt. Colonel Joseph Booth  
Deputy Superintendent  
23 Louisiana State Police

24 Steve Davis  
Senior Vice President, Engineering  
25 Clear Channel Radio

- 1
- 2
- 3 Robert G. Dawson  
President & CEO  
4 SouthernLINC Wireless
- 5 Stephen A. Dean  
Fire Chief  
6 City of Mobile
- 7 Steve Delahousey  
Vice President, Operations  
8 American Medical Response
- 9 Dave Flessas  
Vice President - Network Operations  
10 Spring Network Services
- 11 Martin D. Hadfield  
Vice President of Engineering  
12 Entercom
- 13 Jim O. Jacot  
Vice President  
14 Cingular Network Group
- 15 Tony Kent  
Vice President, Engineering & Network Operations  
16 Cellular South
- 17 Kelly Kirwan  
Vice President, State and Local Government and  
18 Commercial Markets Division, The Americas Group,  
Government, Enterprise, and Mobility Solutions  
19 Motorola Communications and Electronics, Inc.
- 20 Jonathan D. Linkous  
Executive Director  
21 American Telemedicine Association
- 22 Adora Obi Nweze  
Director, Hurricane Relief Efforts, NAACP  
23 President, Florida State Conference, NAACP  
Member, National Board of Directors, NAACP  
24
- 25 Eduardo Pena  
Board Member, League of United Latin American  
Citizens (LULAC)

1

2

3 Billy Pitts  
4 Chief Business Affairs Officer and Washington  
5 Representative  
6 Notification Technologies, Inc.

7 Major Michael Sauter  
8 Commander  
9 Office of Technology and Communications  
10 New Orleans Police Department

11 Marion Scott  
12 Vice President of Operations  
13 CenturyTel

14 Kay Sears  
15 Senior Vice President of Sales and Marketing, G2  
16 Satellite Solutions  
17 PanAMSat Corporation

18 Edmund M. "Ted" Sexton, Sr.  
19 President  
20 National Sheriffs Association

21 Edwin D. Smith  
22 Chief  
23 Baton Rouge Fire Department

24 William L. Smith  
25 Chief Technology Officer  
BellSouth Corporation

Patrick Yoes  
Captain, Special Services Division,  
Commander/Public Information Officer, St. Charles  
Sheriff's Office  
President, Louisiana Fraternal Order of Police  
National Secretary, Fraternal Order of Police  
St. Charles Sheriff's Office

22

23

24 Reported By:  
25 Terry Breland-Moody CSR-1616

□

1 Meeting of the Federal Communication  
2 Commission's Independent Panel reviewing the Impact  
3 of Hurricane Katrina on Communications Networks

4 March 6 and 7, 2006

5 Call to Order and Opening Remarks  
6 Nancy J. Victory, Chair of the Independent Panel

6

7 well, I think we will get this show on the road  
8 since we have a very, very busy day and two days  
9 ahead of us, I guess.

10 So welcome to the second meeting of the FCC  
11 Independent Panel reviewing the impact of Hurricane  
12 Katrina on communications networks. My name is  
13 Nancy Victory, and I am the chair of this panel.

14 I would like to start by extending a special  
15 welcome to some honored guests we have with us here  
16 today. Congressman Chip Pickering, thank you so  
17 much for being here and also for helping us to  
18 arrange this event.

19 I know you have made it a legislative priority  
20 to ensure Congress takes appropriate action to  
21 respond to the lessons learned from Hurricane  
22 Katrina, and I hope that this panel's work product  
23 proves helpful in your efforts.

24 I also want to welcome FCC Chairman Martin who  
25 called for the coordination of this panel and has

□

1 given us tremendous support.

2 Thank you again for joining us and for the  
3 opportunity to serve you and the Commission and the  
4 country in this important endeavor.

5 We also have with us today FCC Commissioner  
6 Deborah Tate. Thank you also for being here.  
7 Since your first day at the Commission, you have  
8 expressed tremendous interest and enthusiasm for  
9 the panel's work, and I so appreciate your coming  
10 to Jackson today.

11 To my fellow panelists, again, welcome and thank  
12 you for being here. I know that dealing with the  
13 aftermath of Hurricane Katrina occupies you all  
14 fully in your regular jobs. Yet you have embraced  
15 this substantial commitment associated with this  
16 panel with diligence and dedication. Thank you for  
17 all of your hard work to date and for traveling  
18 here today, and I'm glad we were able to schedule  
19 this meeting closer to home for many of you.

20 Last but not least, I would like to thank the  
21 folks here at the Mississippi E-Center at Jackson  
22 State University for hosting us today and tomorrow.  
23 I know that you have been working long and hard to  
24 make this event a success. Thank you so much for  
25 opening your wonderful facilities to us today.

□

1 I think it is appropriate for the second meeting  
Page 5

2 of our panel that we are here in Mississippi. We  
3 are all aware that this state sustained  
4 unimaginably severe damage from Hurricane Katrina.  
5 The panel has come here today and tomorrow to  
6 gather more information about the lessons learned  
7 from Hurricane Katrina and how best to put those  
8 lessons to good use.

9 As a reminder, the charge to this panel is to  
10 focus in on the hurricane's impact on the  
11 communications infrastructure. Chairman Martin has  
12 asked us to assess the strengths and weaknesses of  
13 the communications sector preparedness for the  
14 hurricane, to identify the impediments and  
15 facilitators of rapid service restoration, to  
16 evaluate whether adequate emergency communications  
17 were available before, during, and after the  
18 hurricane, and, most importantly, to make  
19 recommendations to the Commission so that we are  
20 all better prepared next time.

21 We are here today in Mississippi in pursuit of  
22 the necessary information to carry out this charge.  
23 My fellow panelists and I very much look forward to  
24 learning from the many speakers who will be sharing  
25 their experiences and thoughts with us today and

□

1 tomorrow.

2       Speakers' contributions at this meeting are  
3       critical to enabling our panel to correctly  
4       understand what happened, what went right and what  
5       went wrong, and how best to ensure that the next  
6       time disaster strikes, the communications sector,  
7       including public safety participants, will keep and  
8       augment the successes, but avoid the pitfalls that  
9       delayed recovery and hindered critical emergency  
10      communications.

11      Before we introduce the first group of speakers,  
12      I do want to turn to our honored guests here for  
13      some remarks.

14      So let me turn the microphone first to  
15      Congressman Chip Pickering, representing  
16      Mississippi's third district.

17  
18  
19  
20  
21  
22  
23  
24  
25

□

3

4 Nancy, thank you very much, and I welcome each  
5 and every one of you here. More importantly, I  
6 welcome your contributions and your comments to  
7 what I hope will lead to solutions and plans so  
8 that we will have the best communications  
9 capability in the most horrific of storms or crises  
10 or events that could happen through Homeland  
11 Security so that we can best protect and serve the  
12 communities and people that we are all committed  
13 to.

14 I want to thank Kevin Martin, the Chairman of  
15 the FCC, for being here, for calling for this  
16 independent panel, and for Nancy's leadership at  
17 the Commerce Department.

18 I want to welcome Deborah Tate, a new  
19 commissioner, not relatively new to the FCC, and a  
20 neighbor from Tennessee, from Nashville; who has  
21 come today. It shows their commitment at the very  
22 highest levels to getting this right and finding a  
23 solution and having a plan. Chairman Martin has  
24 made public safety and public health one of the  
25 highest priorities at the FCC, which is unique, and

□

1 I want to recognize the distinction he has of  
2 making that whether it is our E911 capability or

3 interoperability with IP technologies and our  
4 traditional phone systems part of the legacy that  
5 he will lead and leave at the FCC.

6 But for those of you who have come from  
7 Washington, I also want to point out that it was  
8 our first responders, it was our public safety  
9 people who in the worst natural disaster in  
10 American history acted so heroically, amazingly, at  
11 times miraculously saving lives, rescuing people in  
12 the worst of circumstances, at times with very  
13 primitive communication capability because of the  
14 loss of our networks, the loss of our electricity,  
15 and not have a sufficient plan in place that we  
16 should have.

17 After 9-11, this was a major finding of the 9-11  
18 Commission, that we had to have interoperability,  
19 interoperability capability. I think that after  
20 Katrina, I hope after all the investigations and  
21 independent panels, that we will before the next  
22 hurricane season, which is only 90 days away -- and  
23 I want to give all of us a sense of urgency and a  
24 sense of accountability -- that we must have  
25 something in place that is survivable, that is

□

1 mobile, that is interoperable, and that the federal  
2 resources are there to support each and every one  
3 of you at the local level and at the state level as

4 plans are implemented and coordinated.

5 So I look forward to the testimony today and the  
6 contributions. I welcome everyone here, and I  
7 thank the leadership for being present; and I thank  
8 each of you, more importantly, for the tremendous  
9 jobs y'all did in the worst American disaster in  
10 our lifetime and what you do in representing your  
11 communities, whether it is fire, police, safety,  
12 and private sector. Thank you very much.

13

14 Nancy J. Victory, Chair of the Independent Panel

15 Thank you, Congressman. Chairman, if you would  
16 like to make some opening remarks.

17

18

19

20

21

22

23

24

25

□

1

2

Kevin J. Martin, FCC Chairman

3

4 I do want to thank you, Nancy, for continuing  
5 your leadership on this panel and everyone's work  
6 here today. I certainly am particularly pleased  
7 that we are able to hold this meeting today in  
8 Jackson and that we have Congressman Pickering here  
9 with us.

10 I certainly know that in the wake of the  
11 Commission's immediate aftermath in trying to  
12 respond to the hurricane, Congressman Pickering was  
13 one of the first people to ask to get together with  
14 me and ask what the Commission could try to do to  
15 facilitate both longer-term solutions and/or  
16 immediate relief that could then be provided.

17 I think we're all certainly appreciative of his  
18 leadership on these issues, and the Commission has  
19 appreciated his support as we have been trying to  
20 review what many of these complicated  
21 telecommunications issues.

22 I also wanted to thank the E-Center here at  
23 Jackson State University for being willing to  
24 provide us the resources and the facilities here  
25 today. We appreciate that.

□

1 I do want to thank all the individuals who  
2 volunteered to be present here at this meeting and  
3 their commitment to take on this panel in its  
4 critical undertaking.

5 This is a unique endeavor. The Independent  
6 Panel brings together experts from all the sectors  
7 of the communications industry as well as public  
8 safety organizations, and it is not always the case  
9 that you have both private and the public safety  
10 organizations working together in this kind of  
11 capacity.

12 We are all trying to study the impact Hurricane  
13 Katrina on communications. The panel is going to  
14 review the sufficiency and effectiveness of the  
15 recovery effort with respect to infrastructure and  
16 make recommendations to the Commission on ways we  
17 can improve disaster preparedness and reliability  
18 and resiliency in communications among the  
19 emergency responders.

20 It is especially important that we have this  
21 meeting taking place here in Mississippi where we  
22 many facets of the communications industry and  
23 public safety sector and public interest  
24 organizations who were directly affected by the  
25 hurricane, but were involved in recovery and

□

1 response efforts.

2 Some of the people that you all will hear from  
3 today include emergency medical service personnel,  
4 telecommunications equipment providers, radio

5 broadcasters, and representatives from disability  
6 organizations.

7 They will all offer their own ideas on how to  
8 best address the challenge of communications  
9 services during a hurricane, how better to be  
10 prepared for those kinds of natural disasters in the  
11 future.

12 I certainly don't need to tell anyone here about  
13 the extraordinary destruction of the facilities in  
14 the region and the destruction of communications  
15 services that took place. As many of you all know,  
16 three million telephone lines were knocked down,  
17 significant damage to the wire line, switching  
18 centers that route calls, the lines used to connect  
19 buildings and customers.

20 Thirty-eight 911 call centers went down in the  
21 Louisiana, Mississippi, and Alabama area. Local  
22 wireless networks sustained considerable damage  
23 with more than 1,000 cell sites out of service, and  
24 over 20 million telephone calls did not go through  
25 the day after the hurricane hit.

□

1 An estimated 100 broadcast stations were also  
2 knocked off the air, and as a result of all of  
3 these complications, hundreds of thousands of  
4 people were unable to receive news and emergency  
5 information, contact emergency responders, or

6 communicate with their loved ones.

7 Emergency workers and public safety officials  
8 also had difficulty with communicating and  
9 coordinating with one another. It is at times like  
10 these that we are reminded of the importance of our  
11 communications system, which most of us ordinarily  
12 take for granted.

13 I'm certainly proud of the Commission's efforts  
14 to respond to Hurricane Katrina. Hundreds of  
15 commission employees were involved in these  
16 efforts, working 24 hours a day, 7 days a week.

17 We devoted significant time and resources to  
18 enable first responders to communicate and to  
19 facilitate companies' ability to restore services  
20 in the region as quickly as possible. We provided  
21 millions of dollars in immediate support for people  
22 eligible for FEMA disaster relief. We provided  
23 support for wireless handsets and a package of 300  
24 free minutes. These funds also helped us  
25 re-establish communications for those whose

□

1 communications had been cut off.

2 We supported telecommunications needs of the  
3 region's schools and continue to for the schools  
4 and for health care providers, including the  
5 American Red Cross shelters.

6 And the FCC's commitment to response to Katrina  
7 is as strong as it was the day when I visited the  
8 region just days after the storm.

9 Just last week, the Commission extended its  
10 relief plan to assist the victims of the hurricane.  
11 This action enables eligible cell phone companies  
12 to continue to make available wireless services to  
13 victims of the hurricane, schools and libraries  
14 directly affected by Katrina, can continue to apply  
15 for 2006 funding through the end of September.

16 While the Commission continues to provide  
17 assistance to consumers and businesses affected by  
18 Katrina, we are also taking the time to learn from  
19 the tragedy. That is the point of your panel  
20 today, and I have several suggestions to improve  
21 our ability to serve the public in the event of  
22 another disaster.

23 First, we must ensure that the public has the  
24 tools necessary to be alerted when an emergency is  
25 coming and to contact first responders. Such an

□

1 efficient, effective alert must include the  
2 Internet. And to ensure the people can get  
3 emergency assistance, all phone providers must  
4 comply with our 911 rules.

5 The Commission has made it clear that the  
6 obligation to provide access to emergency operators

7 should not be optional, regardless of what the  
8 telephone providers is wireless, wire lined, cable,  
9 or voice over IP, and also to improve the public's  
10 access to emergency assistance, we must help local  
11 jurisdictions cooperate with one another, making  
12 their 911 call centers more redundant and  
13 resilient.

14 Secondly, we should enable first responder to  
15 communicate seamlessly during the disaster. New  
16 technology such as support radios and local  
17 antennas can be used to re-establish communications  
18 as quickly as possible after a disaster. First  
19 responders must also have the equipment that can  
20 communicate on multiple frequencies and in multiple  
21 formats so police, fire fighters, and EMS personnel  
22 at the local, state, and federal levels can all  
23 talk to one another.

24 Finally, we need to ensure that all  
25 communications providers develop and adhere to best

□

1 practices to ensure reliable and quick restoration  
2 of the services in thr event of a disaster.

3 Best practices need to include, among other  
4 things, that it maintain service during extended  
5 power outages using back-up generators and  
6 equipment and the greater use of IP technologies

7 that are capable of changing and rerouting  
8 telecommunications traffic on a moment's notice.

9 In the event of a system failure with  
10 traditional networks, such IP technologies can  
11 enable service to be restored more quickly and  
12 provide the flexibility to initiate services in  
13 locations chosen by the customer.

14 It is the task of this independent panel to  
15 fully assess what worked and what didn't during  
16 Hurricane Katrina, and, in June, it will make  
17 specific recommendations as to the steps the  
18 Commission should take in order to make our  
19 communications networks more robust in the future.

20 By participating here today, you are greatly  
21 assisting the work of this panel and the FCC in  
22 this regard, and everyone at the Commission thanks  
23 you for your efforts and for being willing to take  
24 on this task. We appreciate all of your efforts  
25 and look forward to hearing your recommendations.

□

1

2

3 Nancy J. Victory, Chair of the Independent Panel

4 Thank you very much, Chairman Martin.

5 Commissioner Tate, would you like to make some

6 opening remarks?

7

8 Commissioner Deborah Taylor Tate

9

10 Thank you Nancy. Thank you for your invitation  
11 to be here. I really appreciate it and, of course,  
12 to be with the Congressman in his hometown and home  
13 district, and I am just so honored and humbled to  
14 be part of this event, this gathering of all of you  
15 all because you all are the resources, the  
16 intellect, and the caring and concern and  
17 encouragement in this horrific event.

18 At the time that you all were facing the  
19 hurricane here, I was actually on a commission with  
20 the Tennessee Regulatory Authority, and even there,  
21 our companies were feeling some of the after  
22 effects.

23 And so I wasn't on the FCC, and so, therefore, I  
24 feel like I can really brag about the FCC. In  
25 almost every meeting that I have been in, the FCC

□

1 has really been referred to as the super star of  
2 many of the agencies and the ability to be nimble  
3 and quick under the chairman's direction to respond  
4 to the events and also the needs of people even  
5 before perhaps we were even asked to or the FCC was  
6 asked to.

7 So I want to thank him for his leadership.

8 And now, of course, I'm so glad to be able to be  
9 here and to continue the important work that you  
10 all have all begun. The extension of many of the  
11 programs that the Chairman mentioned in his remarks  
12 were so important so that people could immediately  
13 begin to communicate with their loved ones and to  
14 make arrangements to rebuild their lives.

15 And although our response in the very beginning  
16 to Hurricane Katrina was a very important step, it  
17 was only a first step, and as the Chairman has  
18 said, we are preparing to do many other -- make  
19 many more additions to that first step.

20 In fact, the Chairman recently has discussed  
21 reorganizing the FCC so that we can be more  
22 responsive and pull all of the functions to be more  
23 efficient at the FCC.

24 I want to commend the Chairman, of course, for  
25 establishing this panel and Nancy for taking so

□

1 much time and effort to lead this panel as we move  
2 forward because it is so important, and, hopefully,  
3 this could be used to enhance the efforts that we  
4 are undertaking not only to respond to the  
5 devastation caused by Katrina, but to protect our  
6 critical infrastructure in the future no matter  
7 what may come our way.

8 Thank you, each one of you all, for your

9 service. This is so very important for you to give  
10 up your time and your effort, your intellect to be  
11 here and be with us today because this isn't just  
12 about Hurricane Katrina, but it's about helping all  
13 Americans in the future everywhere to not only be  
14 prepared to think about this, not just in 90 days,  
15 but as we move forward in the coming years to be  
16 connected and to be able to respond to save lives  
17 and property. Thank you all. I look forward to  
18 being here.

19

20 Nancy J. Victory, Chair of the Independent Panel

21 Thank you very much. I have one more opening  
22 speaker to introduce. Before I do, though, I have  
23 been told that a sign language interpreter has  
24 arrived.

25 And so we would like to position that person in

□

1 the right place. So if there is somebody who does  
2 need the sign language services, if you could,  
3 identify yourselves by raising your hands or  
4 communicating to the organizers who will make sure  
5 that person is in the right position.

6 Otherwise, I think we will just put them perhaps  
7 in a corner where they might be able to be seen  
8 from all angles of the room. Thank you very much.

9 We do have one more opening speaker this  
10 morning, Hu Meena, the President of Cellular South,  
11 based here in Jackson. Mr. Meena, would you like  
12 to make some opening remarks?

13

14

15

16

17

18

19

20

21

22

23

24

25

□

1

2 Mr. Meena, President of Cellular South

3

4 Thank you, Nancy. I appreciate that. On behalf  
5 of Cellular South and the communications industry  
6 in Mississippi, welcome. I would like to take a  
7 few brief moments to talk about the Mississippi  
8 Gulf Coast.

9 Cellular South started on the Mississippi Gulf

10 Coast in 1988. Of course, there's no doubt there  
11 was great destruction in the Greater New Orleans  
12 area during Hurricane Katrina, but, somehow, we in  
13 Mississippi have increasingly become a footnote.

14 In an editorial dated December 14, 2005, the  
15 Biloxi Sun Herald put it this way: (Reading) "As  
16 August 29 besieges the conscious minds of many  
17 Americans, the great storm that devastated 70 miles  
18 of Mississippi's coast and destroyed homes and  
19 lives of hundreds of thousands fades into a black  
20 hole of medial obscurity."

21 There is no question that the New Orleans story,  
22 like ours, is a compelling on-going saga as its  
23 brave people seek to reclaim those parts of the  
24 city lost in floods, but it becomes more and more  
25 obvious, to the national media, New Orleans is the

□

1 story.

2 To the extent that the Mississippi Gulf Coast is  
3 mentioned at all, it is often in an add-on  
4 paragraph that mentions "and the Gulf Coast" or  
5 "and Mississippi and Alabama."

6 As you begin your work today, I would like to  
7 remind you of the devastating impact of the storm  
8 on our state. Just to cite a few examples, Katrina  
9 caused 238 deaths in Mississippi. Katrina caused

10 an estimated 30 to 50 billion in damage in  
11 Mississippi alone.

12 According to the Red Cross, Katrina destroyed  
13 68,000 homes in Mississippi and caused major  
14 structural damage to another 60,000 homes.

15 To date, approximately 31.8 billion cubic yards  
16 of debris have been collected in Mississippi.

17 Unemployment in the Biloxi Gulfport metropolitan  
18 area has jumped from a rate of 5.9 percent to 26.2  
19 percent in the month following Katrina and was as  
20 high as 20 percent at the end of 2005.

21 Nevertheless, our local, state, and federal  
22 government leaders like Congressman Pickering and  
23 some of the others pulled together to make the best  
24 out of a bad situation.

25 while we at Cellular South did indeed have some

□

1 success during the aftermath of the storm in  
2 restoring communication services, we also learned  
3 some valuable lessons. They were restoration of  
4 communications should have the highest priority in  
5 the allocation of resources following a natural  
6 disaster, including fuel and road access to sites.

7 wireless service, while vulnerable to  
8 catastrophe, can and should be designed and  
9 delivered in a manner that minimizes disruption and  
10 allows for quick restoration. wireless service can

11 help address the needs of interoperability of  
12 communication systems between and among first  
13 responders, governmental agencies, victims, and  
14 those with information about victims.

15 And the final point here is the robustness of  
16 wireless networks should be known and evaluated by  
17 emergency management personnel before the disaster  
18 occurs.

19 Cellular South has been involved in restorations  
20 in the aftermath of other hurricanes, tornados, and  
21 ice storms. Hurricane Katrina confirmed what we  
22 already know, that at a time of true crisis, when  
23 lives are at stake and people have to be able to  
24 communicate, we must provide communications  
25 services and not excuses. Thank you.

□

1

2 Nancy J. Victory, Chair of the Independent Panel

3 Thank you very much, Mr. Meena. I appreciate  
4 that.

5 A couple of housekeeping things before we start.  
6 The way we are going to proceed over the next day  
7 and a half is we have five panels of speakers.  
8 They are going to be introduced as a group.

9 We are going to ask all the speakers to deliver  
10 their presentations first. We are going to have to

11 try and keep things on schedule. We are going to  
12 have a ten-minute limit on that, and these lights  
13 are going to help me with this.

14 So you will have a green light for the first  
15 nine minutes, a yellow light for the last minute,  
16 and then the red light will come on. We will ask  
17 you to really try to wrap up and keep us to that  
18 because we would like to provide some time at the  
19 end, after all the speakers speak in each  
20 particular group, for the panel members to ask some  
21 questions; and that will allow us to hear everybody  
22 and have some time for some good questions.

23 So that is the way we will proceed on that.

24 I am going to ask each speaker to announce their  
25 names the first time they speak. This will very

□

1 much help our provider of CART and transcription  
2 services to make sure that they are identifying the  
3 speakers correctly. This will be true both for our  
4 invited speakers as well as our panel members.

5 So if you could remember to do that the first  
6 time you speak, I think that would help things  
7 along very, very much.

8 With that, why don't we get to our first panel.  
9 Let me go ahead and introduce the first panel of  
10 speakers.

11 You have Harlin McEwen, the Chairman,  
Page 25

12 Communications and Technology Committee of the  
13 International Association of Chiefs of Police;  
14 Keith Parker, the Director for Emergency Medical  
15 Service, State of Mississippi. He is here  
16 representing the National Association of EMS  
17 Officials. Juliette Saussy, M.D., Director of  
18 Emergency Medical Service of the City of New  
19 Orleans, Louisiana; Sandy Bogucki, M.D., U.S.  
20 Department of Health and Human Services; George  
21 Sholl, Director of Jackson County Emergency  
22 Communications District; and, finally, we have  
23 Woody Glover, the director of the St. Tammany  
24 Parish Emergency Communications District.  
25 So I appreciate you all being here today and

□

1 sharing your experience and views with this panel.  
2 If we could, start with Mr. McEwen with your  
3 presentation.  
4  
5  
6  
7  
8  
9  
10  
11

12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

□

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12

Panel 1

Harlin McEwen, Chairman, Communications &  
Technology Committee, International Association of  
Chiefs of Police

Thank you, Nancy. I appreciate the invitation  
to be here today. First of all, I would like to  
make the point that although I am the Chairman of  
the Communications and Technology Committee of the  
International Association of Chiefs of Police, I  
serve all four major law enforcement organizations

13 including the National Sheriffs Association, the  
14 major city police chiefs, and the major county  
15 sheriffs as well as their communications advisor.

16 And you have three members on your panel  
17 representing three of those organizations, Sheriff  
18 Ted Sexton, the President of the National Sheriffs;  
19 Sheriff Kevin Beary who is a former president of  
20 the major county sheriffs; and Colonel Booth from  
21 Louisiana who is a member of the ICP Communications  
22 Committee.

23 So you have good representation from those  
24 organizations.

25 I want to start out by thanking Chairman Martin,

□

1 first of all, for creating this panel and also to  
2 commend him for working closely with the public  
3 safety community.

4 Not only do I work with the four law enforcement  
5 organizations that I mentioned just a moment ago,  
6 but we also have a coalition for improved public  
7 safety communications which, in addition to those  
8 organizations, includes the International  
9 Association of Fire Chiefs and the Association of  
10 Public Safety Communications officials; and those  
11 organizations are the core public safety  
12 communications experts, so to speak, in Washington

13 working with Chairman Martin and with the Congress  
14 to give them our best advice on things at the  
15 national level so that the local people have the  
16 tools that they need, spectrum, money, other kinds  
17 of things that they need to make this all work.

18 And I also want to thank Dan Gonzalez. I don't  
19 want to forget him as the chief of staff and the  
20 chairman in his work with us. We do appreciate his  
21 assistance.

22 Let me just start. And you have a copy of my  
23 remarks, and they're fairly brief; and I will go  
24 through them quickly.

25 But I want to start out by quoting Sheriff Beary

□

1 at your first meeting in which he made the point  
2 that people plan for a disaster, and we have them  
3 frequently. However, Katrina was a catastrophe;  
4 and she brought different challenges than the  
5 Florida hurricanes in 2004.

6 This is the substance of what I'm going to talk  
7 about briefly here this morning, and that is that  
8 there is a difference between what we consider to  
9 be disasters which are small regionalized kinds of  
10 things such as tornadoes.

11 They're not insignificant things. Don't  
12 misunderstand me, but usually what happens is you  
13 have other resources surrounding the area where the

14 incident occurred that can come to the aid of those  
15 if needed.

16 When you have an issue like Katrina where it  
17 affects three states, where much of the public  
18 safety infrastructure was wiped out, where people  
19 didn't have police cars, police stations, fire  
20 stations, ambulances. Things that were normally  
21 relied upon were pretty much out of service, no  
22 power, no fuel.

23 That is a different issue than the normal kinds  
24 of what we consider to be disasters that public  
25 safety has traditionally been prepared to deal

□

1 with. Although public safety communications are  
2 delivered in a number of ways, most agencies rely  
3 upon their traditional government-owned land mobile  
4 radio systems.

5 Such systems are usually built to plan for  
6 unusual stresses. Public safety also relies on  
7 commercial cellular type services and to a smaller  
8 degree on satellite communications for supplemental  
9 or back-up communications services, but,  
10 unfortunately, those services are not always  
11 reliable when public safety needs them the most.

12 I use the point that we look at this as three  
13 priorities. First of all, the first priority is

14 that we need reliable agency-specific voice  
15 communications every day. We need that at every  
16 kind of situation.

17 Police, fire, EMS are delivering services where  
18 they rely upon that as their primary issue, and it  
19 has to work every day. It has to work in any kind  
20 of an incident where there is a disaster or a  
21 catastrophe.

22 Second is the reliability of inter-agency voice  
23 communications which we commonly call  
24 interoperability, and that is the ability for the  
25 police to talk with other police, police and fire

□

1 to talk with each other, EMS, and, third, for local  
2 government to talk to state officials and state and  
3 local people who talk with federal officials.  
4 That's interoperability.

5 And then the last priority is now becoming a  
6 greater priority, and that is reliable data  
7 communications. As you know, I mean, the  
8 technology is rapidly advancing to the point where  
9 we have opportunities to do things that we have  
10 never had the ability to do before.

11 Reliable means, whenever public safety personnel  
12 need to communicate, that it works. That's the  
13 bottom line, and that's reliability. We can't have  
14 anything less in public safety. It always has to

15 work. It has to work every day. It has to work  
16 for any kind of an incident or any kind of a  
17 disaster or any kind of a catastrophe.

18 We have to be able to talk either directly to  
19 from one radio to another or through a network  
20 through a radio tower or base station or repeater.  
21 we need to have an available radio channel, and we  
22 have to have radio that has power; and you are  
23 going to hear me talk about that in a minute.

24 This is true in all times, in disasters and  
25 everyday catastrophes. Reliability means that

□

1 public safety must plan for everyday peak service  
2 times of large incidents. They have to have a  
3 radio system disruption such as power outages,  
4 tower failures, and so on. They have to plan for  
5 those disruptions.

6 They must plan for personal radio equipment  
7 failures such as electrical problems, mechanical  
8 problems, battery failure, or whatever, and they  
9 have to plan for catastrophic wide-area failures of  
10 almost everything that is connected with that  
11 operation.

12 Public safety is traditionally for short-term  
13 events and disasters, not long-term, wide-spread  
14 catastrophes. Five outcomes from Katrina stand out

15 in the report so far. First, tower and  
16 infrastructure failures; second, power failures --  
17 that is tower sites, dispatch centers, portable  
18 radio batteries. Third, the public switch  
19 telephone network and the network infrastructure  
20 failure, land line and microwave; four, public  
21 safety personnel issues, meaning that if your  
22 personnel are off and worrying about their families  
23 and not able to report to duty, then you have a  
24 problem as well; and a need for deployable systems.  
25 I'm giving you some slides on each of these

□

1 topics. In the tower infrastructure failure arena,  
2 we have traditionally always planned for one tower  
3 to be, you know, out of service, either because  
4 there is no power, because the tower was blown  
5 down, but we never planned for a lot of towers  
6 being destroyed and out of service.

7 So we have to plan more for a widespread kind of  
8 destruction.

9 The second one is power failures. For tower  
10 sites and dispatch centers, most public safety  
11 agencies planned for power failure, but, generally,  
12 those plans are for 24 to 48 hours of outage rather  
13 than several days or weeks. Generators are usually  
14 powered by gasoline, diesel, natural gas, or  
15 propane.

16       Soon after the hurricane struck, it was realized  
17       that fuel supplies were not readily available and  
18       the natural gas supply was disrupted. I came in by  
19       taxi cab here late last night from the airport, and  
20       I asked the taxi driver as I was coming in, what  
21       were the issues that you saw, you know, from your  
22       perspective here in Jackson.

23       He said, "well, first of all, most of the area  
24       was without power for four to five weeks." He  
25       said, "I was lucky. I had a power outage for three

□

1       days."

2       But if the power is out and public safety  
3       doesn't have power and they don't have generators  
4       and stuff to do that, you are basically out of  
5       business.

6       The second thing he said was he didn't have any  
7       fuel. He said, for a taxi driver -- you know,  
8       think about this now in the public safety arena.

9       He said, "I didn't have any fuel. So I couldn't  
10       operate. So nobody could get a taxi cab because  
11       there wasn't any gasoline to drive them around. So  
12       I just stayed home."

13       well, think about that in the public safety  
14       arena. If you don't have fuel to power the  
15       generators, to power the radio towers and all the

16 other equipment that you need, that basically puts  
17 you out of business.

18 So those power failures also result in the  
19 problem with the portable radio batteries that are  
20 limited usually to an eight to ten-hour duty cycle.  
21 They have to be recharged. Nobody today uses  
22 throw-away batteries. It is just too expensive,  
23 and most people don't have them on the shelf for a  
24 back up because they have a very short-term shelf  
25 life.

□

1 And so if you don't have some way to charge  
2 those batteries, if you have no power to charge the  
3 batteries or if you have no fuel to run the  
4 chargers, then it is just one thing after another.  
5 Basically, you have nothing.

6 Third is the public switch telephone network and  
7 the land line or microwave issues. The failure of  
8 the public switch telephone network created massive  
9 outages in public safety land and mobile  
10 communications. We rely upon the wire lines to  
11 connect a lot of our systems, and a lot of times  
12 those were out of service; and in some cases, the  
13 microwave links were blown down or not powered.

14 So that kind of affects all of the other issues,  
15 as I said. I made mention of the public safety  
16 personnel issues, and I just point out to you that

17 those are big issues.

18 The last point I want to make is the need for  
19 deployable communications systems, and that is,  
20 when you think about it, in a widespread  
21 catastrophe like Katrina, the only real answer was  
22 to have some kind of deployable systems that were  
23 brought in from the outside.

24 When the total infrastructure is wiped out or  
25 out of service for a variety of reasons, you have

□

1 to have something in place to deal with that. I'm  
2 recommending that this panel think about that.

3 I realize that you couldn't possibly have enough  
4 deployable systems to cover every inch of the area  
5 that was covered here in Katrina, but you need to  
6 do at least the best in the major metropolitan  
7 areas.

8 So I guess my bottom line is the demand for  
9 longer term kinds of outages, and the last slide in  
10 my presentation is a picture of a tower down in  
11 Slidell, the Slidell police tower; and one of my  
12 fellow speakers this morning, Woody Glover down at  
13 the other end of the table, gave you this slide.

14 And I use it because he makes the point that  
15 this tower, if you can see how it is wrapped around  
16 the top -- came down and wrapped around the rest of

17 it, he said, you know, this tower worked better  
18 after it broke down than it did before.

19 So I don't know whether that tells us anything  
20 or not. I have given you some additional material  
21 for you to look over, and I will be glad to answer  
22 questions at the end of the panel. Thank you.

23

24 Nancy J. Victory, Chair of the Independent Panel  
25 Thank you very much. We will turn to Mr. Parker

□

1

2 Keith Parker, Director, Emergency Medical  
3 Services, State of Mississippi (representing  
4 National Association of EMS Officials)

5

6 Thank you Ms. Victory and the members of the  
7 panel for the opportunity to speak to you today.

8 Again, I'm Keith Parker. I'm the Director of  
9 the Bureau of Emergency Medical Services for the  
10 Mississippi Department of Health. As it was said  
11 today, I'm representing the National Association of  
12 State EMS Officials, and we will be presenting  
13 statewide communications issues encountered in  
14 Mississippi, Louisiana, and Texas during Hurricane  
15 Katrina.

16 The impact of Hurricane Katrina to the Gulf  
17 states will be felt for years into the future.

18 There are many lessons to be learned from this  
19 catastrophic disaster, and it is imperative that we  
20 make the necessary changes to ensure that all  
21 states are better prepared when the next  
22 Katrina-type storm hits the United States.

23 While Hurricane Katrina was one storm, each of  
24 the Gulf States experienced very different  
25 disasters. However, a common problem identified

□

1 for all states involved was the lack of the ability  
2 to communicate with local officials, emergency  
3 responders, state and federal officials in a timely  
4 manner.

5 This lack of communication raised situations at  
6 times of confusion and chaos. It took longer to  
7 provide the services needed to the communities  
8 devastated by the hurricane because all the right  
9 people could not communicate with each other  
10 effectively.

11 After the winds of Hurricane Katrina died down,  
12 emergency services in the Gulf States were  
13 mobilized to aid in recovery efforts. It wasn't  
14 until these services arrived in the disaster areas  
15 that it was realized that there was nearly total  
16 destruction of all communications infrastructures.

17 As a state agency, the Mississippi Department of

18 Health was unable to communicate with local EMS  
19 authorities and hospitals adequately in order to  
20 dispatch state-contracted ambulances to needed  
21 areas.

22 Once state assets were sent to those locations,  
23 we were unable to obtain status reports or monitor  
24 progress being made. There were many needs of the  
25 local citizens in the aftermath of the hurricane.

□

1 State agencies could have been more efficient and  
2 effective in responding to these needs if basic  
3 communication was available to all emergency  
4 responders.

5 At the height of the recovery efforts in  
6 Mississippi, nearly 100 additional ambulances were  
7 dispatched to the affected areas of the state.  
8 Most of these assets were from out of state.

9 If a common national radio frequency was  
10 available, the ability to communicate with these  
11 assets would have made all the difference in making  
12 sure that they were utilized in the most effective  
13 manner.

14 Before we can have interoperability, we must  
15 have operability, and the flooding shut off the  
16 operability supporting the response of our local  
17 agencies across entire regions. Therefore,  
18 communications must be survivable and interoperable

19 between various local, state, and federal stake  
20 holders. Continuity of operations planning must be  
21 effectively supported and widely distributed well  
22 in advance of problems such as those Katrina  
23 generated.

24 Finally, all users must be trained on  
25 interoperability and back-up systems to ensure

□

1 continuity of operations. The response to wind,  
2 rain, fire, tornadoes, earthquakes requires a  
3 variety of choices in technology to maintain  
4 communications. While building systems that can  
5 talk to each other and using gateways to connect  
6 users on different systems, we have not looked at  
7 deployable systems to bring on site in the future,  
8 such as the -- system when local and regional  
9 infrastructure is inoperable or destroyed.

10 Along with these public safety systems on  
11 wheels, interoperability frequencies will need to  
12 be made available for licensing in a deployable  
13 mobile environment. Equipment and operating  
14 standards are also critical to ensure regional all  
15 the way up to national and international can  
16 communicate when they are deployed to a distant and  
17 often remote location.

18 Only through commonly-adopted equipment

19 standards and standard of operating procedures such  
20 as NIMS can a national response to catastrophes  
21 like Katrina be effective and successful.

22 Planning is critical to communications response.  
23 Statewide planning is critical. Nationwide  
24 planning is critical. Political and turf issues  
25 also must be resolved before any meaningful

□

1 planning can occur. Planning, however; must start  
2 at the local level in order for local governments  
3 to communicate effectively within their regions  
4 with adjacent regions and to state level with  
5 regards to communications needs.

6 Radio capability is critical in any disaster or  
7 hazardous situation. Emergency service cannot rely  
8 on existing systems to be working in catastrophic  
9 events such as Katrina. Emergency services as a  
10 whole needs systems that can be rapidly deployed to  
11 allow law enforcement, fire, and EMS to communicate  
12 within each group and across each group.

13 Designated statewide and national frequencies  
14 are critical with each arm of emergency services.  
15 All radios should be transmitting and receiving  
16 these frequencies. EMS has had essentially the  
17 same communications system for the past 35 years.  
18 The robust future of the EMS communications system  
19 will require more bandwidth than is now available

20 for voice, data, video imaging, and other  
21 communications.

22 The FCC is urged to move ahead with increasing  
23 public safety allocation of band widths in such  
24 areas as the 700 MHz range to accommodate these  
25 needs.

□

1 There will always be catastrophic events. The  
2 question is, will we be better prepared for the  
3 next one. Communications is the central part of  
4 NIMS and must be supported if EMS is to be fully  
5 prepared.

6 I would like to thank the panel for this  
7 opportunity to address these issues with you today.  
8 Thank you.

9

10 Nancy J. Victory, Chair of the Independent Panel

11 Thank you very much. We will turn next to Dr.  
12 Saussy.

13

14 Juliette M. Saussy, M.D., Director, Emergency  
15 Medical Services of the City of New Orleans, LA

16

17 Good morning. I'm the Director of EMS for the  
18 City of New Orleans. I'm also a practicing  
19 emergency room physician, a former paramedic, and

20 I'm here representing the National Association of  
21 EMS Physicians.

22 Thank you to the panel for this opportunity to  
23 share experiences from the local EMS perspective  
24 regarding the loss of communications in New Orleans  
25 in the aftermath of Hurricane Katrina, and we

□

1 Mississippians in New Orleans do not minimize, but  
2 share your struggles in Mississippi despite how the  
3 press plays this out.

4 On the evening of August 28 at 2327, New Orleans  
5 EMS, in conjunction with fire and police, ceased  
6 911 operations. As the winds picked up, it became  
7 necessary for the dispatchers to seek shelters of  
8 last resort as well as the first responders with  
9 that being moved from our communications center to  
10 a safe location.

11 The intent to return was there until the levees  
12 breached and the Comm. Center was inundated with  
13 water. A total loss of EMS and fire communications  
14 ensued.

15 Police continued to answer 911 calls from their  
16 Comm. Center which came in by cell phone, but had  
17 no help to send and no way to communicate with  
18 their people, and then that Comm. Center flooded.

19 August 29, surrounded by water and stranded  
20 ourselves, our worst fears were realized. We had

21 no way to communicate except by line of sight. Our  
22 radios were not operable. Most land lines and cell  
23 phones were useless, and our communications centers  
24 were under water; and when help arrived, we  
25 couldn't communicate with them either, public or

□

1 private.

2 It must be stated that Region 1 had not achieved  
3 interoperability, but at this point, we were only  
4 concerned with operability. I will remind you, we  
5 had no way to communicate with each other, other  
6 public safety personnel, state, or federal  
7 officials.

8 So what happened? Our portable radios went  
9 silent, and our land lines were dead. Our main  
10 channels failed. When we went to an ITECH channel,  
11 it was fraught with the volumes of multi-agency  
12 traffic.

13 One of our EMT's was playing around with his  
14 radio and discovered that we could communicate on  
15 an FAA channel but with each other only, so we knew  
16 that at least we were alive.

17 No functioning 911 communications center were  
18 there in New Orleans. One of the lessons learned,  
19 I like to call it shoved down our throats. We did  
20 learn, but it wasn't in your traditional learning

21 format.

22 what I know today is that we have to have  
23 operable first. Then we can work on  
24 interoperability. We must have redundancy. We  
25 must have a system of systems because when one

□

1 fails, we need to have back ups in place.

2 we must have one language. All the hoopla about  
3 700 or 800, just pick one. We need one, and we  
4 need to utilize the same language.

5 we must have one line of communication. That  
6 means it must be governed by universal policies and  
7 procedures. We must all jump on the same band  
8 wagon.

9 we must have standardization of equipment,  
10 master control sites. The fact that we all used  
11 different pieces of equipment makes it almost  
12 impossible to achieve interoperability.

13 we must have planning. That planning must be  
14 functional and coordinated. It must be followed.  
15 It must be practiced, and we must have room for  
16 resourceful thinking. Things change, and plans  
17 must be able to accommodate the situational  
18 variations.

19 we also have got to be able to honestly assess  
20 our performance, which we seem to have trouble  
21 doing as a nation. There must be a forum for all

22 levels of participation. Our staff within our own  
23 organizations, management must be able to honestly  
24 evaluate their performance and response. We have  
25 to be able to identify our shortcomings and our

□

1 future challenges. what did work, also what did  
2 not work.

3 we have to be willing to redesign based on  
4 experience and willing to continue to exercise the  
5 plan over and over and over again.

6 So what local challenges do we face?

7 without a doubt, we face regionality issues. we  
8 have to resolve our boundaries. We have inter and  
9 intra governmental mind sets, a bureaucracy that  
10 costs people their livelihoods and their lives.

11 For us, it is parishes. For other places, it is  
12 counties. We have medical societies that don't  
13 talk to each other, and we have protocols that are  
14 absolutely different from one line to the next.

15 Nationally, you, too, face regionality issues,  
16 leadership issues, coordinated exercising issues,  
17 and then the financial constraints that bind us  
18 all. what we need from you is a clear message from  
19 a single agency.

20 we need increasing bandwidth availability,  
21 certainly in EMS. As we begin to do video

22 monitoring and biotelemetry in the future, we will  
23 need your support with increasing bandwidth.  
24 We need standardization of interoperability,  
25 standardization of calling frequencies, and

□

1 encouragement of open communications and financial  
2 support between Safe Com and the Department of  
3 Homeland Security, recovery.

4 Initially, we received Verizon cell phones and  
5 were able to communicate initially with our  
6 cellular -- help of our cellular partners. We have  
7 since consolidated our 911 communications center.

8 What that means is that EMS, police, and fire  
9 all sit in the same room, and it's worked  
10 beautifully. We do have a communication district  
11 oversight, and now all our public safety agencies  
12 are under Homeland Security, which is a new spot.

13 From the state recovery, they do support our  
14 regional concepts, and they support our system of  
15 systems; and we're very hopeful that we will see  
16 some growth.

17 So as I sit here before you today, a public  
18 servant, humbled by this unique opportunity to tell  
19 our story and share my insights of being at ground  
20 zero. I will remind you that we have three months  
21 until the beginning of hurricane season.

22 So I would like to leave you with two messages.

23 This country has a plethora of politician and the  
24 striking possity of leadership. Thank you, Mr.  
25 Martin, for the FCC leadership. Until we, as a

□

1 nation, commit to financially supporting  
2 preparedness, preparedness on the communication  
3 front, the terrorism front, the natural disaster  
4 front, the man-made disaster front, we will  
5 continue to suffer from the devastating effects of  
6 only being partially ready.

7 Anything worth having has a price tag, and it is  
8 now within our reach to make the commitment of our  
9 time and money to ensure homeland security. Thank  
10 you.

11

12 Nancy J. Victory, Chair of the Independent Panel

13 Thank you very much. Let me turn next to Dr.  
14 Bogucki.

15

16 Sandy Bogucki, M.D., U.S. Department of Health and  
17 Human Services

18

19 Thank you, Nancy. I'm Sandy Bogucki. I'm also  
20 an emergency medicine services physician, and my  
21 participation is also sponsored by the National  
22 Association of EMS Physicians.

23 My role is slightly different, and that is why  
24 they asked me to participate today. Just like Dr.  
25 Saussy's role in attempting to obtain the best

□

1 possible care for the patients who are under her  
2 responsibility, as a result of her role at EMS.  
3 The role of the back-up plan, that is, the ability  
4 for the State and, ultimately, the Federal  
5 Government to respond expeditiously and with the  
6 right assets absolutely is determined by how robust  
7 our communications are.

8 My current position is as a senior medical  
9 adviser in the Department of Health and Human  
10 Services in the office of Public Health Emergency  
11 Preparedness in Washington, DC. During the  
12 hurricane response, I had a number of different  
13 roles. During the lead up to Katrina, I was in the  
14 secretary's operations center and working on  
15 prepositioning the various Health and Human  
16 Services sets that were ultimately deployed.

17 Following landfall, when the extent of damage  
18 and destruction was clear, we had to divide our  
19 operations, and I took over the ESFA operations  
20 from the federal standpoint for Mississippi. That  
21 included the protracted deployment of the two  
22 mobile hospitals, one in Waveland and one in  
23 Gulfport, which both stood for more than 70 days

24 serving the -- or trying to make up for the  
25 devastated infrastructure along the Gulf Coast.

□

1 In addition, during the lead up to Hurricane  
2 Rita, I was also the operations chief for the  
3 transport during the evacuation stage for the Texas  
4 hospitals.

5 There are a number of EMS relevant observations  
6 that I would like to make, and I think I need to  
7 frame them just very briefly for you. In terms of  
8 the way they configure or the configuration that  
9 the response is supposed to take, as is well known,  
10 the disasters or the catastrophes are local first,  
11 but, ultimately when local capacity and mutual aid  
12 capacity in the immediately-surrounding areas are  
13 tapped out or the infrastructure is gone, then the  
14 requests are supposed to go in an orderly format to  
15 the State through the Emergency Management System.  
16 with or without some substantial contribution from  
17 the Health Department and then ultimately the  
18 emergency management from the State refers or makes  
19 action requests to the Federal Government.

20 At the RRCC or the regional response  
21 coordinating centers, which are located -- that's  
22 our federal assets for the forward component.  
23 Those take place with respect to Katrina, the RRCC

24 for Mississippi was in Atlanta. And the one for  
25 Louisiana was in Dallas because they're in

□

1 different FEMA and HHS regions.

2 Ultimately, at the RRCC and then eventually the  
3 joint field offices that are stood up for all of  
4 the participating agencies, but under the  
5 leadership of FEMA in a more forward position, at  
6 those locations, mission assignments are set out;  
7 and FEMA assigns different federal agencies to the  
8 different tests that the State has identified that  
9 need assistance.

10 Finally, at the headquarters level, it's  
11 important to understand that particularly in an  
12 event the size of Katrina where we're talking about  
13 catastrophe and not just local disaster, there is  
14 desire by the Feds to attempt to anticipate what  
15 the requirements are going to be so that we can  
16 start moving those or start identifying where we  
17 might be able to find the relevant resources and  
18 also to start moving them in the right direction.

19 This is referred to as leaning forward, and, as  
20 you know, happened with variable success in the  
21 course of the response to this hurricane across the  
22 broad slough that it cut.

23 From the standpoint of Health and Human  
24 Services, mission assignments to us or to the

25 emergency support function No. 8, the health and

□

1 medical response, generally involves staffing to  
2 hospitals and/or to special needs shelters.

3 Frequently, it also involves both staffing and  
4 finding platforms for providing portable or mobile  
5 hospitals, also servicing special needs shelters,  
6 providing subject matter experts across a wide  
7 range of activities, from looking at the safety of  
8 food and water to looking at animals, looking at  
9 the infrastructure of hospitals.

10 We send in architects to see whether they can be  
11 inhabited or reinhabited and a wide range of other  
12 areas.

13 Finally, the provision of health and medical  
14 material, in this case, in massive quantities to  
15 two different centers, station centers where  
16 material was being received.

17 You will notice that three out of four of those  
18 involve personnel, which means that we have to have  
19 mechanisms for accountability of our personnel,  
20 safe food and water for them, transport on the  
21 ground for them frequently back and forth between  
22 their job and their building and also a safe place  
23 for them to sleep; that is, out of the weather and  
24 safe from where there has been loss of the public

25 safety infrastructure.

□

1 Four out of four of those require reliable  
2 communications between the deploying agency, other  
3 federal agencies that may be overseeing these  
4 activities, and the Locals with whom they must  
5 absolutely, critically be integrated.

6 The assets that we were able to deploy in  
7 support of that communications function was a  
8 mobile command post, which was sent forward prior  
9 to the landfall. This includes a vast array of  
10 multi-mobile communications, and, very briefly,  
11 that includes both high and low band UHF.

12 These are critical not only for being able to  
13 communicate with or at least hear EMS, but also  
14 some of the general responders such as MEMS, both  
15 high and low band VHF. Again, FEMA in these  
16 regions communicates over these frequencies, also  
17 involves being able to pick up weather.

18 We have the typical scanner that you can pick up  
19 anywhere that has the trunk tracking and the widest  
20 possible frequency range. Micom and Icom radios,  
21 not only HAM radio equipment, but also the  
22 expertise to try to gather as much information from  
23 the HAM transmissions as possible.

24 This turns out to be a critical capability,  
25 although important to keep in mind that unlike the

□

1 ability to track communications across public  
2 safety, it takes a great deal more radio traffic  
3 with the HAMS to develop a true situational  
4 awareness or operative picture than it does simply  
5 to be able to hear public safety.

6 Finally, we had wireless and cell  
7 communications, satellite phones and broadband  
8 Internet access aboard this facility, which was  
9 entirely generator capable.

10 When New Orleans fire and EMS communications  
11 went down, so did the major window for most of the  
12 federal oversight agencies who were attempting to  
13 gain situational awareness. When the 911 system  
14 went down, as Dr. Saussy noted, the only visibility  
15 became direct line of sight. Direct line of sight  
16 for us in the SOC was CNN, of course.

17 An important part of the communications network,  
18 which goes outside of the traditional public safety  
19 and radio networks, but is most critical for all of  
20 EMS as well as for all of the Health and Human  
21 Service response is the ability to communicate with  
22 hospitals, what has happened to them after  
23 landfall, do they still have patients, do they need  
24 evacuation, do they need critical supplies, do they  
25 need staff?

□

1 The loss of communications with the hospitals  
2 going on for days in Mississippi and weeks in some  
3 cases in Louisiana, other than being able to supply  
4 individual -- people who could go or had  
5 intermittent cell service was an absolutely  
6 critical loss.

7 The satellite phones, I think it's important to  
8 understand that even if the technology had worked  
9 and some of the satellite technology turned out not  
10 to be as reliable as had been hoped, there were  
11 also tremendous issues around user capabilities  
12 with them, user understanding of how the technology  
13 works, and how you go about making use of it, and  
14 also maintenance issues.

15 Since the satellite phones are used so rarely,  
16 almost no one had adequate upkeep and maintenance  
17 on these units. And so there was a remarkable  
18 amount of failure there.

19 Finally, the most important response, I think,  
20 that HHS sent into the field, although we are  
21 health and medical, was -- the generator-driven  
22 portable cell sites was the only thing that kept  
23 the Blackberries working. The Blackberries,  
24 although recently threatened by patent infringement  
25 issues, was the only way that we had to communicate

□

1 with our own personnel on the ground and, to a  
2 large extent, with public safety and the other  
3 really critical areas as, for most part, I think  
4 very few people understand there was a single land  
5 line going in and out of the EOC's that everyone  
6 who was present had to take turns using.

7 Thank you very much for the opportunity to share  
8 these experiences.

9

10 Nancy J. Victory, Chair of the Independent Panel

11 Thank you very much, Doctor. Let me turn next  
12 to Mr. Sholl.

13

14 George W. Sholl, Director, Jackson County Emergency  
15 Communications District

16

17 Thank you very much. I would like to take this  
18 opportunity to provide a glance or a glimpse of  
19 what happened in our community.

20 Jackson County is one of the three counties, the  
21 eastern most, with about 135,000 people, and it has  
22 four cities. All these cities are located below  
23 I-10 in a little strip right along the Coast.

24 Many of the things we've heard since the storm  
25 have been how things have failed. I'd like to at

□

1 least start off by saying our system, I believe, at  
2 least technology did succeed. Ours worked very  
3 well, I think.

4 we learned a great deal, and, certainly, there's  
5 a lot that can be fixed. Where we did fail, it  
6 failed gracefully. And it failed in the way that  
7 we thought it would fail, and we knew how to take  
8 care of it.

9 Our primary radio system down there is a 800 MHz  
10 radio system, Motorola, ten channel, trunking  
11 simultaneous transmission. We have three sites.

12 The system performed well during the first part  
13 of the storm. Later on, the microwave started  
14 failing. We went into a situation called fail soft  
15 where, reminiscent of the old CB radio days, we had  
16 radio channels. It's first come first serve.  
17 Everybody gets to talk at once or at least it seems  
18 that way.

19 The way it turned out, that's the way it's  
20 designed to work, and it gives very, you know,  
21 survivability. It turns out that we had never  
22 practiced it. And the users were not familiar with  
23 it.

24 And the first thing they saw when they turned on  
25 their radio was the word "failed." And so that

□

1 caused a great deal of concern both during the  
2 storm and afterwards when they said our radio  
3 system failed. It didn't. We just didn't have  
4 them trained well enough.

5 We did lose one of our sites to water, about  
6 four-and-a-half feet or so, and it managed to take  
7 that out out.

8 And so the morning after, we were operating, I'd  
9 say, about probably 20 percent of our capability.  
10 Range was decreased. Capability was decreased,  
11 coverage and that type of thing, but our vendor,  
12 Motorola, was able to come in very quickly. They  
13 were in the evening of the storm, Monday evening,  
14 and by Tuesday, they had gotten two of our sites  
15 back up into simultaneous trunking.

16 And I'd say we were back up to 80 percent the  
17 first day, and then they were able to bring in a  
18 portable system to replace the one that had been  
19 destroyed; and we had all three systems up and  
20 operating by the evening of the third day. And we  
21 were back to 100 percent coverage as far as the  
22 user was concerned.

23 There were probably about 750 or so subscribers  
24 that was the coverage about the time of the  
25 Katrina. During the storm, we were also able to

□

1 provide about another 225 subscriber units through  
2 rental/purchase from Motorola.

3 That's sort of what happened during the storm.  
4 I would say also that in the 911 world, which is  
5 another one of my responsibilities, again, it  
6 operated as advertised. It failed gracefully.

7 We have six PSAPS within the county. Whenever  
8 one failed, transmission would automatically flow  
9 to others, and this continued to cascade down till  
10 where there were only a couple left operational.

11 Again, this is not something we had practiced a  
12 great deal, and so the dispatchers were somewhat --  
13 oh, I'd say concerned and were not ready, for  
14 example, to be receiving calls outside of their  
15 area.

16 At the time, in the middle of the storm, there  
17 was no first responders to respond anyway. So they  
18 were receiving the calls from the people, you know,  
19 in the attics with water rising, and they couldn't  
20 do their job. They couldn't send anybody. They  
21 didn't know where to send them to.

22 But, again, the system worked as advertised.

23 The impact on communications -- our operational  
24 communications under this 800 MHz system -- again,  
25 what we primarily learned was we had it, but we

□

1 needed additional training and exercises to make  
2 sure that folks understand exactly how to do it.

3 We also will do a better job, I think, next time  
4 in fleet mapping, making sure that the right people  
5 do have the right fall-back channels to go to.

6 Let's see. Also, people, as mentioned, the HAM  
7 radio services were vital during the storm for us.  
8 Satellite telephone did not seem to work very well  
9 at all, very limited use of -- most of the people  
10 wandered around going, can you hear me; can you  
11 hear me. And that seemed to be constant on that.

12 Cellular phones worked fairly well through the  
13 storm and immediately after, and we actually  
14 maintained a dial tone on our land lines. Again,  
15 they were out immediately after even though there  
16 wasn't a lot of people to talk to, but during the  
17 restoration services, they managed to provide a  
18 fiber optic link, apparently, in the city and took  
19 all the cellular stations off as well as the  
20 contact between all the CO's, central offices.

21 So, as a result, we ended up sort of shooting  
22 ourselves in the foot on that, but, again, by that  
23 time, we had managed to restore the 800 system. So  
24 we were fully operational there and that took up  
25 some of the slack until they could get the fiber

□

1 optic system corrected.

2 I guess one of my big disappointments was the --  
3 Mississippi, of course, provided all the counties  
4 with interoperability equipment, the SU1000, and  
5 these were in place, ready to go. And we just  
6 didn't have the people trained to do it. And as a  
7 result, we did not utilize that system to its  
8 maximum, at least we did not in Jackson County.

9 And, again, this is one of the things we're  
10 going to fix with the next one, but we did not have  
11 the training; and then, of course, we also did not  
12 have the various access to different radios that  
13 people would bring in.

14 So there were some technical issues there, too,  
15 primarily training.

16 One final thing I would like to say regarding  
17 land lines -- we can go back to that -- is that  
18 while -- and this -- has to do with preplanning for  
19 us, making sure that we know who to contact prior  
20 to the storm so that after the storm we have a  
21 glimpse into their restoration efforts.

22 We did that with the other utility companies,  
23 with power and water and waste water. We did not  
24 do that with the land line companies or with the  
25 cellular companies to any degree.

1 And so we really didn't -- we knew they were out  
2 there working. We just didn't know what was going  
3 on as far as their schedule and their priorities  
4 and that kind of thing.

5 Lessons learned, again, I'd break it down into  
6 training. We have the technology out there. As  
7 long as we keep that -- where we are, as long as we  
8 keep it modernized and continue to do that, spend  
9 money there, I believe we will be okay. We have to  
10 put more emphasis on the planning, training, and  
11 testing and doing that continually.

12 I will also say we have some mitigation issues  
13 that we have to take into account. For us, the one  
14 site that we lost, we're going to, you know, spend  
15 money to mitigate that and make sure it won't ever  
16 flood again. It will be something else the next  
17 time, I suppose.

18 But we'll continue to do that and make sure  
19 we're ready for the next one.

20 I would like to thank you very much for this  
21 opportunity.

22

23 Nancy J. Victory, Chair of the Independent Panel

24 Thank you very much. Let me turn next to Mr.  
25 Glover, and I understand this is going to be a

1 joint presentation with Ms. Hansen, who I did not  
2 get a chance to introduce earlier.

3 Jenny Hansen is the Project Coordinator, Next  
4 Generation 9-1-1, at the U.S. Department of  
5 Transportation.

6 So I will turn it over to you both.

7

8

9 Woody Glover, Director, St. Tammany Parish  
10 Emergency Communications District & Jenny Hansen,  
11 Project Coordinator, Next Generation 9-1-1, U.S.  
12 Department of Transportation.

13

14 Thank you. I'm Woody Glover. I will go first.  
15 I'm the Director of the St. Tammany Parish  
16 Communications District. If you are not familiar  
17 with St. Tammany Parish, we are on the north shore  
18 of Lake Pontchartrain across from New Orleans.

19 Jenny will speak in a few minutes to kind of  
20 update you on the NG9-1-1 project that the  
21 Department of Transportation is working on, which  
22 is the next generation of 911 equipment.

23 My remarks today will be confined to the 911  
24 systems, that aspect of communications in our  
25 parish.

1 I'm going to tell you what went wrong with our  
2 911 system during the storm, what preparations we  
3 are making for the next storm while upgrading what  
4 we have in place to help overcome some of that and  
5 how we are trying to implement some of the NG9-1-1  
6 features as they are being developed and then where  
7 we stand in the recovery and preparation for the  
8 next one.

9 First of all, I have got to tell you what went  
10 wrong. During the height of the storm, we lost our  
11 telephone network. Trees were falling, and the  
12 bridges were falling. We lost all of our  
13 communications to our tandem, which was the  
14 Franklin tandem in New Orleans.

15 The tandem is the heart of the 911 system. All  
16 of our calls route through there. All the sorting  
17 is done through there.

18 We lost that tandem. Therefore, we lost the 911  
19 system. This happened during the height of the  
20 storm.

21 After the storm, the 911 system was still down.  
22 I contacted some of our local telephone reps. Once  
23 I was I able to locate them asked them to  
24 implement procedures for a central office isolation  
25 condition.

1 This is where the local central office still  
2 functions. We can call anybody within our area.

3 For example, I was in Covington. I could call  
4 anyone in Covington that still had a telephone up,  
5 and anyone could call me; but we could not call the  
6 rest of the world and could not reach that tandem  
7 through our calls.

8 So the 911 system, anyone dialing it, they were  
9 getting a fast or busy response. In the central  
10 office isolation condition, the local telephone  
11 switch can be reprogrammed to not attempt to send  
12 the calls to the tandem, simply redirect them to a  
13 local seven-digit number, in our case, the  
14 sheriff's office emergency number.

15 When that didn't happen, I found our technicians  
16 and asked them to implement that plan. They did  
17 not know how to implement that plan. I found out  
18 we had a training issue there. They said that it  
19 could not be done because the tandem is down.

20 No, that's the reason we do it, because the  
21 tandem is down.

22 This was on Monday afternoon right after the  
23 storm. It was the next day, Tuesday, before they  
24 were able to get through to some of the other  
25 technicians in Atlanta that could explain to them

□

1 how to reprogram the switch to redirect the calls  
2 to that local seven-digit number.

3 That caused me quite a bit of concern. I  
4 thought we had the procedures in place to do it  
5 automatically. We did not.

6 I failed in that respect, but once I asked them  
7 to implement it, they did not know how to do that.

8 So that was a big concern for me.

9 Once we did that, we had basic 911. If someone  
10 dialed 911 from one of those exchanges, it went to  
11 a local seven-digit number with no address, no  
12 call-back numbers, nothing but voice. But voice  
13 was great. We loved having it. The public loved  
14 having it.

15 We actually remained in its by-pass mode,  
16 central office isolation mode, for four weeks.  
17 Once the network started being restored, we found  
18 that we were losing it very often.

19 People were clearing trees with chain saws and  
20 bull dozers and dropping them on the phone lines  
21 again and again. So we remained in that condition  
22 for quite a while.

23 We initially lost only the connection to the  
24 tandem in New Orleans. The tandem itself actually  
25 survived Hurricane Katrina, the initial onslaught

1 of it. We lost it about two days later when the  
2 flood waters surrounded it and eventually could not  
3 support it any longer with fuel to the generators.

4 But our problem was in the network. We had  
5 plans for network upgrades for the 911 system  
6 before the hurricane. We were in the talking  
7 stages, and we were talking about the need to go to  
8 new equipment.

9 We are building a new communications center in  
10 our parish. It's located in an old courthouse,  
11 which will be the emergency operations center for  
12 the parish.

13 The parish EOC will be there. We will put a new  
14 Comm. Center in there, and, hopefully, several of  
15 the agencies will come in there with us. Right now  
16 it's only going to be the sheriff's office, but  
17 we're hoping that more will join us in there.

18 In talking about this equipment, in prior  
19 months, we were looking at the next generation 911  
20 equipment and how that might help us, and now it  
21 became important for us as we look at the new  
22 equipment that we use an IP based system.

23 So that's where we are going. We are in the  
24 final stages of contracting for that equipment. We  
25 expect to sign that final agreement this week on

□

1 that.

2 For the future, we are looking to use IP based  
3 equipment, which we're calling an NG9-1-1, next  
4 generation 9-1-1 equipment. It is using voice and  
5 data that will be distributed over a local network  
6 such as Net PBN or Frame Relay or something of this  
7 nature, but we'll be able to distribute calls  
8 around our parish without depending upon the  
9 tandem.

10 We will still use a tandem for initial routing  
11 and things, but this will give us some fall-back  
12 procedures in the event that we get isolated from  
13 that tandem again.

14 We can use it send not only 911 calls, but other  
15 calls that we can get into that switch, the seven  
16 digit or any other way that we can get in there.  
17 Also, we're hoping to use it to work with our  
18 neighboring parishes once they implement similar  
19 technology.

20 Once they have this technology and we put these  
21 networks in place, we can serve as a back up for  
22 those parishes. They can serve as back up for us.  
23 We can readily our messaging back and forth.

24 So we're looking to use it to help solve a lot  
25 of our problems that we encountered during the

□

1 hurricane. Also, one big plus of it is the

2 voice-over IP telephones that we're having today.  
3 The issue we've had with those -- I think everyone  
4 is familiar with that.

5 They're being developed so eventually those  
6 calls can come all the way to the PSAP on the  
7 Internet itself and not have to go into the land  
8 lines. Once those procedures are developed, the  
9 interface, once that is developed, we think that we  
10 will be poised to accept those calls from the  
11 Internet with our IP based equipment.

12 And now I will turn this over to Jenny and let  
13 her give you a little bit of an update on the DOT  
14 and where they fit in this program.

15

16 Jenny Hansen

17

18 Thanks, woody. I'm Jenny Hansen. I'm a  
19 contractor for the US DOT coordinating a project  
20 called Next Generation 9-1-1. It's a two-year, \$11  
21 million 911 initiative that focuses on next  
22 generation technology.

23 Over the years, how does DOT fit into a 911  
24 world?

25 The secretary several years ago had a wireless

□

1 911 initiative that brought in state agencies  
2 around the country in public safety to look at

3 deploying Phase 2 cellular technology.

4 In that work, the secretary discovered that  
5 technology was changing. It's always going to  
6 several steps ahead, especially in public safety.

7 So it's about time we work shoulder to shoulder  
8 with industry and technology and be prepared for  
9 the next best tool.

10 So we're looking beyond today and looking at a  
11 base of IP network, and we will be bringing in  
12 through an RFP process a group or team of public  
13 and private stakeholders to come together, design a  
14 next generation high level architecture for 911  
15 call delivery and a migration plan for today's 911  
16 centers to transition to such technology.

17 We are now in the throes. In the issue of time,  
18 I will just try to provide an overview. Again, we  
19 are in the throes of developing the RFP today. We  
20 are speaking to wireless industry all over the  
21 country to be sure that they are aware of the  
22 project and, as we move forward, to start  
23 incorporating new ideas, we're following projects  
24 like Woody's and other states and local government  
25 agencies around the country, if not worldwide. We

□

1 have some significant interest from Canada in  
2 launching this project.

3 But, again, from an IP platform, we will be able  
4 to accommodate voice, video, data, all things  
5 digital through this network. While we are focused  
6 on 911 call delivery, as our scope, we have a short  
7 time frame and a limited amount of money. We would  
8 be remiss if we didn't incorporate the good works  
9 of NRIC VII, other public safety association's  
10 efforts, and some of the challenges that other  
11 public safety efforts are under today, like, radio  
12 communications, distance learning programs through  
13 the Department of Defense, and other local  
14 government issues.

15 There are hand-out materials providing a  
16 historical overview of DOT's relationship to E911  
17 efforts in particular as well as the 911 initiative  
18 and what is called a preliminary concept of  
19 operations.

20 We brought in users from around the country to  
21 develop the first blush of what operationally and  
22 functionally this network architecture will be able  
23 to do for the 911 industry. There is also a work  
24 site available for further information, and,  
25 please, feel free to comment and/or contact us

□

1 later for additional information. Thank you for  
2 your time.

3

4 Nancy J. Victory, Chair of the Independent Panel  
5 Thank you very much to all the speakers. Now, I  
6 would like to open this to my fellow panelists for  
7 questions of any of our speakers, all of our  
8 speakers. Sheriff Sexton.

9 BY MR. SEXTON: Dr. Saussy, I was  
10 there. I don't think you could have said it any  
11 more eloquently than the way it really happened.

12 Mr. McEwen, this deployable system  
13 that you're talking about, can you describe briefly  
14 what you envision that to be? Is that going to be  
15 500 radios with rooftop mounts and cigarette plugs  
16 that will get this going, or what?

17 MR. MCEWEN: Basically, I want you to  
18 know what a COW is. It's like a cellular on  
19 wheels. We're talking about similar types of  
20 units. A number of the companies, their's  
21 Cingular, Verizon, Nextel, a number of companies  
22 have those things that are deployable systems.  
23 what we don't have readily available, a public  
24 safety base system that would be able to provide us  
25 with more than just cellular types of

□

1 communication.

2 For instance, -- does have more than just  
3 calling. They have emergency response units

4 strategically located around the country. In the  
5 event of a disaster they are often deployed. The  
6 problem is is that with Katrina there were not  
7 enough of those, and we need to have more of a plan  
8 to be readily available. Several people mentioned  
9 the fact that we haven't trained properly. Not  
10 only do we need to have the equipment and the  
11 ability to do these things, but we need to use  
12 those and be able to use those satellites.

13 Prior to the problem of the failure of  
14 satellite communication was -- use those. They  
15 need to have training and be more prepared to use  
16 those. So, it can't be said, just the fact that  
17 satellite didn't work, in some cases there were  
18 mechanical, or physical, or electrical problems.  
19 Most cases it was a matter of most people not  
20 knowing how to use them.

21 MS. VICTORY: Thank you very much.

22 PANEL QUESTION: Dr. Bogucki, You were  
23 EFSA on the ground.

24 DR. BOGUCKI: No, sir. I was in  
25 Washington, DC.

□

1 PANEL QUESTION: In DC. I'm sorry.  
2 ESF2 is emergency communications, and you may not  
3 be able to answer the question, but the National  
4 Response Plan calls for the NRRCC to appoint a

5 federal emergency communications coordinator to be  
6 deployed to the scene of the incident.

7 Do you know if that was done for this  
8 disaster?

9 DR. BOGUCKI: No, sir, I don't.

10 PANEL QUESTION: You also mentioned  
11 that HHS had a mobile command post that was  
12 deployed. Where was that deployed to?

13 DR. BOGUCKI: It started out north of  
14 Baton Rouge, and after landfall, when patients were  
15 being moved from the air head in New Orleans and  
16 had actually had a number of patients at various  
17 sites around LSU in shelters, which eventually  
18 turned out to have a lot of special needs and then  
19 actually sick patients in them, the command post  
20 stayed there for a good while before moving on  
21 transiently to Mississippi.

22 PANEL QUESTION: Thank you. In  
23 addition to my role and responsibilities with  
24 American Medical Response during times of disaster,  
25 I'm the ESFA medical disaster officer for Harrison

□

1 County, Mississippi. I would like to say thank you  
2 for Nevada 1 and North Carolina 1 who we  
3 affectionately call K Mart general since that's the  
4 only place we could find to set them up. They did

5 a great job.

6 NDMS and DMET performed superbly. I  
7 have told the other members of my subgroup, if we  
8 can organize communications like NDMS and DMET,  
9 perhaps that is the way to go to have -- because  
10 they were pre-deployed. They did hit the ground  
11 running with supplies and equipment and never asked  
12 what they needed from us. They asked, what can we  
13 do for you, and they did a great job. If we could  
14 use that concept perhaps for emergency public  
15 safety communications especially, that might work a  
16 lot better.

17 with regard to communications with  
18 local health care facilities, in Harrison County,  
19 we did have communications with all of the  
20 hospitals. We had an entirely functional 800 MHz  
21 system that did not go down, and just a  
22 recommendation for HHS at a federal level or a  
23 regional level, perhaps if the evacuations could be  
24 coordinated through the local EOC's that have  
25 communications with the hospitals, that might work

□

1 a little bit better.

2 It did work better than I thought it  
3 would. In Mississippi, as you know, we had no  
4 casualties at any of our hospitals, at any of our  
5 --, and no casualties as a result of any medical

6 evacuation, and that's something I'm very proud of  
7 and working with the Department of Health and  
8 people from HHS, I think, helped us pull that  
9 off. So thank you.

10 MS. VICTORY: Thank you, sir.

11 DR. BOGUCKI: Thank you.

12 PANEL QUESTION: Nancy, could I just  
13 make one comment --

14 MS. VICTORY: Absolutely.

15 PANEL COMMENT: -- to the question  
16 that you started with about the National Response  
17 Plan and a federal communications coordinator.

18 For the most part, the National  
19 Response Plan is a framework for doing things  
20 better than we've done them before, and, for the  
21 most part, very little has been done around the  
22 country to put that into place.

23 So the problem is there aren't any  
24 real --- with a few exceptions, there aren't any  
25 real federal experts on state and local public

□

1 safety communications. This has to be done at the  
2 local level. We have to have our people involved.

3 So I want to make sure that people  
4 know that this is not going to be solved at the  
5 federal level. It has got to be done with federal

6 leadership.

7 MS. VICTORY: Thank you very much.  
8 Steve Dean first and then to you, Steve.

9 MR. DEAN: Thank you, Nancy. First of  
10 all, I would like to say thank you to each of you  
11 for coming in and sharing your experiences with us  
12 and helping us to make a decent recommendation as  
13 we go forward.

14 Mr. MCEwen, I would like to ask one  
15 question. In your presentation, you said that  
16 there was a loss of natural gas supply.

17 Could you give me some kind of idea of  
18 where that was?

19 MR. MCEWEN: My understanding of Joey  
20 or Colonel Booth -- I talk to Colonel Booth  
21 affectionately as Joey. My understanding is that  
22 the natural gas supply was disrupted in New  
23 Orleans, in that area. The problem is a lot of the  
24 emergency generators were powered by natural gas.

25 Once that was disrupted, of course,

□

1 then they had no power for those generators. That  
2 is what I have been told by people knowledgeable,  
3 and there are people here from New Orleans that  
4 know some of that issue that could better respond  
5 to that than I can.

6 MR. DEAN: Thank you. I know we  
Page 77

7 certainly had a major problem with fuel. I think  
8 we had a major problem across pretty well the  
9 eastern seaboard as well as down toward the Gulf  
10 Coast when the hurricane came through because there  
11 was a large impact on the ability to manufacture  
12 fuel in the area, and that impacted the entire  
13 nation as that pipeline shut down. So thank you  
14 very much.

15 MR. GLOVER: Can I elaborate on that?  
16 I'm Woody Glover, St. Tammany Parish. Even though  
17 I don't operate that radio system. I work with the  
18 EOC and very close with those agencies.

19 Regarding natural gas, we had quite a  
20 few isolated outages. As the trees were blowing  
21 over, the roots were uprooting the gas lines and  
22 rupturing those and causing a lot of outages with  
23 gas, with natural gas.

24 So that was an issue within our area.  
25 In our case, none of our generators were fired by

□

1 natural gas. We fired quite a few of them on  
2 diesel, and then the generators that were powering  
3 the radio system towers were powered by propane;  
4 and the sheriff's office had a local supplier on  
5 contract to provide propane. Plus, they had an  
6 out-of-state supplier in case the local one was out

7 of service, which it was.

8 The issue that they had with getting  
9 propane was getting a hold of that guy to tell him,  
10 we need you to bring propane. He could get there.  
11 They got the roads cleared where he could get to  
12 us. Obviously, he had to come in a special truck.  
13 They managed all of that, but their issue was  
14 communications in getting -- letting him know that  
15 they needed his services there. Thank you.

16 MS. VICTORY: Thank you. Steve Davis,  
17 I think you are next.

18 MR. DAVIS: Thank you. Steve Davis  
19 with Clear Channel Radio. My question is for  
20 Harlin McEwen regarding the use of communications  
21 methodologies to coordinate the evacuations.

22 I was just curious whether the  
23 International Chiefs of Police or any of the  
24 entities that you work with are familiar with the  
25 Emergency Alert System and the Federal

□

1 Communications Commission and that the radio  
2 stations make available to you, and I wondered if  
3 any of that was helpful to any of the entities, and  
4 if not, you know, what we might do to improve the  
5 Emergency Alert System to make it more useful to  
6 you, Mr. McEwen.

7 MR. MCEWEN: Well, interestingly  
Page 79

8 enough, I also served as the police chiefs'  
9 representative on the Media Security Reliability  
10 Council along with Clear Channel as a  
11 representative. In fact, they are going to be  
12 meeting in Washington on Friday of this week.

13           And they are addressing that issue,  
14 the Emergency Alert System, which I suspect, Nancy,  
15 is why you probably won't spend a great deal of  
16 time on it, although it certainly is an issue.

17           Let me just say that in most cases  
18 around this country, Emergency Alert System is not  
19 functional or really very helpful.

20           So in some cases, there are people.  
21 Some states have implemented it, and it works quite  
22 well. Other places it doesn't work very well at  
23 all.

24           As you know, emergency alerting has to  
25 be multifaceted. It has to be done through, you

□

1 know, all kinds of different media. We use cell  
2 phones. We use television. We use radio.

3           If you're going to be effective, you  
4 have got to have multiple ways to reach the public,  
5 and that's what the MSRC or the Media Security  
6 Reliability Council, one of the things they're  
7 addressing.

8                   So, you know, other than to say that I  
9 think everybody knows that we need to do better and  
10 that that's being addressed, Chairman Martin has  
11 made that, again, one of his priorities.

12                   So I think it is being addressed by a  
13 different group hopefully, with support from this  
14 group.

15                   MR. DAVIS: Right. I agree with you,  
16 and I do have the honor of serving with you on the  
17 MSRC and representing Clear Channel's position  
18 there.

19                   I was just wondering. I know that  
20 during the actual Katrina aftermath, a lot of  
21 people, we heard, were only kept apprised of what  
22 was going on via the radio because we had a lot of  
23 electrical power outages.

24                   So only transistor radios were really  
25 working. A lot of cellular outages were there, et

□

1 cetera.

2                   And so, to us, if we can make the EAS  
3 work better for you, all of you in the first  
4 responder area, it is a huge megaphone that you can  
5 use to address the entire public, and I think that  
6 where we need help -- and maybe this is where I'm  
7 asking for guidance and advice is in training  
8 the first responders, the EOC people, installing

9 the equipment and training them how to work it more  
10 so that it is something on the broadcasting end --  
11 would you agree with that -- because I believe that  
12 when the National Weather Service triggers it, we  
13 generally do interrupt our programming.

14 MR. MCEWEN: Absolutely. There are  
15 many failures as it relates to that whole system,  
16 and, you know in the beginning, the Media Security  
17 Reliability Council was addressing it long before  
18 Katrina. It was the 9-11 issues.

19 They talked about, you know, the fact  
20 that all of the towers in the World Trade Center  
21 which housed most of the communications facilities  
22 for the radio and television stations for the area  
23 were totally destroyed.

24 And so, you know, those are the kinds  
25 of things that we are all talking about. Secondly,

□

1 there isn't any good plan in place except in a few  
2 locations around the country for the public safety  
3 people to get the information that needs to be  
4 communicated to the radio and television stations  
5 to get the information out to the public.

6 So that is one of the things that  
7 council is working on right now is trying to put  
8 all of those together. They have had a couple of

9 pilots, and I think they are actually going to have  
10 some good recommendations.

11 MR. DAVIS: Thank you.

12 MS. VICTORY: Thank you very much.

13 PANEL QUESTION: Harlin, could we not  
14 plug into the Amber Alert System to expound upon  
15 this? It is an on-going project that would  
16 probably address Mr. Davis' concerns also. Would  
17 that not be a good place for us to plug in?

18 MR. MCEWEN: Exactly. The successes  
19 in the Amber alert are very good, and that is one  
20 of the issues that is being addressed.

21 MR. BEARY: Nancy, one other thing --  
22 I would like to the IP connected here also. There  
23 is no reason that something like Mississippi,  
24 Alabama, Florida, Louisiana, in a situation that  
25 was hit like this, that we couldn't be dictating to

□

1 our subscribers via Blackberry or what have you  
2 that we have got a real serious situation, and they  
3 update their alert system, too.

4 MR. MCEWEN: Yes.

5 MR. BEARY: It goes beyond TV and  
6 radio and things like that.

7 MR. MCEWEN: Yes. I support that.

8 MS. VICTORY: Bob, is this on this  
9 issue or a new one?

10 PANEL QUESTION: A new one.

11 MS. VICTORY: Okay. I will put you on  
12 the list. John Linkous, I think you had a  
13 question.

14 MR. LINKOUS: Dr. Bogucki, you had  
15 talked about how HHS had deployed a communications  
16 center in the field. I was just curious as to how  
17 that is shared with those facilities, that  
18 equipment was shared with local responders.

19 Is there a policy set forth, and when  
20 you deploy that, how that is made available to the  
21 hospitals or emergency situations?

22 DR. BOGUCKI: It is a communication  
23 capability, which is its primary function is to  
24 support our personnel in the field. It doubles as  
25 a command post for our deployed personnel prior to

□

1 there being a fixed structure for them to operate  
2 out of, and since it's designed to be mobile, the  
3 best that they can do, really, once they have a  
4 location, to try to set up with the area first  
5 responders or hospital networks or whatever.

6 In this case, there was not a lot of  
7 time between when they arrived on scene and when  
8 systems began to fail. So what they had done is  
9 they had programmed in frequencies for fire and

10 EMS, and those failed almost as fast as they had  
11 gotten those on line. They switched to relying on  
12 the HAMS who were stationed throughout the state.  
13 And they found that to be their best system.

14           Clearly, there is room for more robust  
15 integration communications both across the  
16 interagency at the federal level; that is, working  
17 with the mobile units that FEMA puts out, our  
18 capability, and then both the State and the Locals.

19           with respect to the Locals, the Feds  
20 don't have a direct authoritative means of  
21 communication. So listening is a way for us to  
22 obtain situational awareness, but as far as asking  
23 for assistance of the federal interagency, that  
24 still, on an organizational basis, needs to go  
25 through the State and into FEMA.

□

1           MR. LINKOUS: One other question, Dr.  
2 Saussy, you give, again, excellent testimony and  
3 quite moving, and I'm impressed with the work that  
4 you have done so far to put things back in order.

5           But a fairly simple question -- if you  
6 were hit with Katrina again today, given the  
7 communications capabilities, would that be  
8 survivable?

9           DR. SAUSSY: Well, we survived the  
10 first time. So I imagine we will survive again.

11 The question would be, would we be able to do  
12 anything different, and the answer is no.

13 That is why I encourage you. You  
14 know, we've got three months, and it's very  
15 possible that it will happen again. We need your  
16 help, no doubt about it.

17 And just to kind of piggy back on what  
18 Sandy said, I think you danced around it. The  
19 truth is, is there is a disconnect between the Feds  
20 and the Locals, and I've had the privilege of  
21 working with Sandy now more recently. There's no  
22 need for that. We know each other now by, you  
23 know, having to work together. But that is what  
24 should occur long before any disaster. There is no  
25 reason that our federal partners and our state

□

1 partners and our local partners -- that we can't  
2 know each other in each particular region, you  
3 know, based on their threat levels, and, certainly,  
4 the Gulf Coast for hurricanes and ports for  
5 terrorism, et cetera.

6 So my suggestion would be that we get  
7 to know each other. Thank you.

8 MS. VICTORY: Thank you. Ms. Nweze.

9 MS. NWEZE: Yes. Thank you. I want  
10 just two quick questions.

11 Dr. Saussy, I want to join my  
12 colleague in telling you what a real riveting  
13 testimony was that you gave.

14 We have been getting questions about  
15 people who speak other languages and the challenges  
16 that they faced.

17 What did you find and what  
18 recommendations would you make to make it better  
19 the next time?

20 DR. SAUSSY: Are you talking about in  
21 terms of getting out messages?

22 MS. NWEZE: Getting out messages, the  
23 whole piece of relief and recovery.

24 DR. SAUSSY: I think you have to know  
25 your community first and foremost. Each of our

□

1 communities is made up of people who speak  
2 different languages and have barriers to certain  
3 communications, and we need to identify them and  
4 address them

5 MS. NWEZE: Well, we had concerns. I  
6 wondered, specifically, did you have concerns. We  
7 heard them from not only New Orleans, but obviously  
8 throughout Louisiana, people who did not have  
9 access to some of the services as a result of them  
10 speaking other languages and not having people who  
11 spoke those languages be able to give information

12 to them, whether it was via radio, whether it was  
13 via whatever form of communication that was being  
14 utilized.

15 DR. SAUSSY: I can only speak for our  
16 organization. Any time I can't talk to a patient  
17 about whatever it is I need to talk to them and  
18 there is a language barrier, I'm concerned.

19 So those are concerns. Those are  
20 things we need to address. We certainly are facing  
21 language barriers now like we have never seen  
22 before in New Orleans, and I think your points are  
23 well taken; and we need to -- we need to address,  
24 you know, the cultural differences and the language  
25 differences.

□

1 MS. NWEZE: Thank you. Mr. Parker,  
2 just very quickly, we had some concerns about  
3 people in rural areas of Mississippi not having  
4 access to emergency relief.

5 Have you in your plans made any  
6 additional attempts to strengthen the communication  
7 process so that they would?

8 I know the idea of transistor radios  
9 is going to be absolutely critical as one idea.

10 But are there others that you have  
11 talked about in terms of how you can strengthen

12 that communication with those persons?

13 MR. PARKER: Again, we also identified  
14 several places like you mentioned that there were  
15 communication issues at the local level, and I  
16 think that is where we need to start.

17 As Dr. Saussy said, we need to have  
18 the local officials identifying the community and  
19 seeing what resources are needed within each of  
20 their rural areas. It's going to differ from  
21 county to county, and it's hard to identify them  
22 from a state perspective. We have to depend on  
23 those at the local level to let us know that we  
24 have populations that are more territorial in a  
25 certain area of our state and not prominent in

□

1 other areas of our state, and they vary from  
2 different nationalities and language barriers that  
3 they have.

4 So what we are doing as -- from the  
5 state perspective, from the Department of Health,  
6 is working with the local emergency operators. We  
7 have state employees that are regionalized that are  
8 working with those local officials to do regional  
9 planning that becomes then part of the state  
10 planning, but we're just now gathering that  
11 information to find out what are the needs, what  
12 will help better that communication once these

13 disasters eventually will happen again.

14 MS. VICTORY: Yes, Jenny.

15 MS. HANSEN: I have just a quick  
16 follow on to that. I would encourage the inclusion  
17 of the special needs communities, as well. The FCC  
18 in particular is a champion in bringing on groups  
19 like the National Organization on Disabilities and  
20 those groups on emergency communications summits,  
21 and like Mr. McEwen said about federal leadership,  
22 we have to, at least we would be remiss in our jobs  
23 in knowing better by now in being able to provide  
24 groups like this to come to the table and share  
25 their experiences, but especially reach out to

□

1 those communities in particular.

2 MS. VICTORY: Thank you very much.  
3 Sheriff Beary, you had a question.

4 MR. BEARY: Yes. To follow up with  
5 Adora, when we had the three storms hit Florida, we  
6 were able to utilize 311 communications and get it  
7 off the 911 system. It's very important to take a  
8 look federally to try to start using 311 across the  
9 nation.

10 I'm still appalled that we don't have  
11 911 communications systems across the nation yet,  
12 and yet we're in the 21st century. One thing that

13 we did back in Orange County when we had three  
14 storms in 44 days, fortunately, not the extent that  
15 our neighbors here in Mississippi and Louisiana  
16 went through. Folks, our major networks, our major  
17 radio stations allowed Creole and Spanish also to  
18 be televised and telecasted right over the system.  
19 I think we have to take a look at that on a  
20 national basis.

21 And it might need a little kick in the  
22 pants from FCC every once in a while.

23 MS. VICTORY: Thank you very much.  
24 Bob Dawson, you had a question.

25 MR. DAWSON: Bob Dawson, SouthernLINC

□

1 wireless. This is first for Mr. McEwen and anybody  
2 else that wants to respond.

3 A lot of the talk seems to be focused  
4 on what is particularly referred to as the first  
5 responder public safety folks, and that's  
6 critically important; but what would your  
7 instructions be to the FCC to make sure that all  
8 critical infrastructure industries along with the  
9 first responders are at the table when we talk  
10 about frequencies, funding, and anything else that  
11 has to do with communications. A lot of this  
12 revolves back to you need power for this stuff.  
13 Power would be one of the critical infrastructures.

14 MR. MCEWEN: I think that's critical.  
15 I think that will, hopefully -- Nancy, will come  
16 out of some of the work here and your  
17 recommendations, and that is that there has to be  
18 greater collaboration between all of the critical  
19 infrastructure people.

20 AS I said, communications is a  
21 multi-faceted thing for public safety, but people  
22 don't think about the power issue, the fuel issue,  
23 all of those other things. All of that has to fit  
24 in, and it has to work. We don't care, you know,  
25 where -- any one point of failure that ruins the

□

1 system is important to us.

2 So collaboration is very important. I  
3 think that would be -- I would recommend that that  
4 would be one of the strong recommendations coming  
5 out of this panel is that the power companies and  
6 all of the -- all of the other people that would be  
7 involved with this collaborate and have further  
8 discussions about how to make this work better in  
9 the future.

10 MS. VICTORY: Let me ask sort of a  
11 follow-up question to the panel because, you know,  
12 Harlin, you touched on in your comments and a  
13 number of you mentioned the need to be at -- needs

14 to be driven at the local level. A lot of this  
15 needs to be driven at the local level because  
16 that's where the needs are, that's where the  
17 personnel is, those are where the folks need to be  
18 talking, but it needs to be plugged in at the  
19 federal level; and the Feds really need to give  
20 this whole process a kick in the pants.

21 what would you recommend to this  
22 committee to structure that? what should the Feds  
23 be doing to encourage or provide a stick to get the  
24 state and local bodies to come together, and what  
25 sort of organization needs to be formed at the

□

1 state and local level to have these conversations  
2 before disaster strikes and then afterward in order  
3 to coordinate because, I think, where I see a  
4 disconnect is, yes, it makes sense to have folks  
5 get together at the state and local level, but how  
6 do you have a uniform model or strategy or to-do  
7 list coming from the federal level and to provide  
8 that oversight or the encouragement, strong  
9 encouragement, to have that done quickly and done  
10 in a way that if those talks are happening at the  
11 state level, you actually have some uniformity in  
12 process and language and protocol between one state  
13 and another for a region-wide disaster.

14 so I would be interested in any of the

15 panelists' thoughts.

16 MR. MCEWEN: It is dangerous to talk  
17 to this issue because there are many different  
18 opinions, but, basically, those of us that are  
19 involved with the national public safety community,  
20 trying to deal with some of these issues, believe  
21 that it has to be federal leadership. It has to be  
22 state leadership. It has to be local  
23 participation. There has to be a governance  
24 structure set in place so that all the players feel  
25 like they are a part of it. They have to be included.

□

1 They have to be listened to.

2 You can't make plans -- the Federal  
3 Government has a tradition of trying to do things  
4 without talking to the people that are affected,  
5 and what we're trying to say is that we need their  
6 leadership, but we need to have local  
7 participation.

8 I personally believe that the only way  
9 to really do that is with the state structures. In  
10 other words, the state structures -- unfortunately,  
11 all states aren't equal, and all governors aren't  
12 equal. Where the governors and state authorities  
13 have included local participation from all of the  
14 various entities, they are very successful.

15                   when the State, just like the Federal  
16 Government, makes decisions unilaterally without  
17 the participation of the people affected, it  
18 doesn't work well.

19                   So, I mean, I basically look at that  
20 three -- you know, that's the way it has to happen.

21                   DR. SAUSSY: I would like to comment  
22 on that. I think it is interesting the words that  
23 you choose, and that is that we have federal  
24 leadership and state leadership and local  
25 participation.

□

1                   I will remind you that you have some  
2 very capable leaders at the local level who need to  
3 interface on a regular basis with your state  
4 leadership. And why on earth can't the state  
5 leadership interface with the federal leadership on  
6 a regular basis.

7                   So my suggestion on how can you fix  
8 this and fix this quickly -- we clearly saw how  
9 folks in positions that they weren't qualified to  
10 be in, how that affected us on such a broad level.  
11 It blows my mind that the Federal Government can't  
12 -- we have 50 states and probably a hundred and  
13 something large cities -- why the Federal  
14 Government can't appoint a state person to  
15 represent perhaps the FCC, the Department of

16 Homeland Security.

17                   we had no idea who to talk to,  
18 couldn't tell you who this guy in that uniform and  
19 this guy and he answered to that and his mission  
20 was this, that, and the other thing. Hire some  
21 people with qualifications. Interview them. How  
22 long can that take? Interview the folks, put them  
23 in the positions, meet with them regularly, have  
24 on-going dialogue so the first time I meet you is  
25 not when I'm standing in 10 feet of water.

□

1                   So that's -- that's the  
2 recommendation, and -- and -- and you need to  
3 consider the fact that you must have strong  
4 leadership at the local level and they must  
5 interface at the state level or it will never work.

6                   MR. BEARY: I would like to comment.  
7 And have qualified people in position, not a bunch  
8 of political appointees who couldn't find an  
9 elephant in a phone booth with a nose bleed.

10                   DR. SAUSSY: That's why you write a  
11 job description, and you interview people.

12                   And, again, we have 50 states. That's  
13 50 folks. That can't take that long.

14                   PANEL QUESTION: Ms. Victory --

15                   MS. VICTORY: Yes.



17 and get to know each other, work together so that  
18 the incredible turf battles that are still going on  
19 as we sit here today -- they're going on in my city  
20 -- don't occur. Those turf battles costs thousands  
21 of lives, and it's just -- it's inexcusable. It  
22 needs to stop.

23                   This is not about power. This is  
24 about people. This is about saving lives. This is  
25 about communicating and working together. There is

□

1 no room for turf battles with a disaster of this  
2 magnitude or the next disaster we'll face.

3                   So, yes, I'd be incredibly happy if  
4 each organization that had a stake holding in this  
5 identified somebody that they'd like to speak for  
6 them, and then we'd all sit around a table and  
7 figure out how we can do it. We don't need to call  
8 it anything. We don't need to call it Homeland  
9 Security or HHS or the United States military. We  
10 can call it whatever we want to call it, but it's  
11 going to work.

12                   MS. VICTORY: Just as a follow up, as  
13 I understand your recommendation -- if I can sort  
14 of put it in a structure that I would understand --  
15 you are suggesting the creation of some sort of an  
16 on-going relationship at the state and local level

17 on communications issues and that there is a  
18 permanent plug-in relationship at the federal level  
19 somewhere, whether it is the FCC or DHS, but that  
20 there are relationships there that take place prior  
21 to a disaster that can be renewed and activated in  
22 the wake of a disaster.

23 DR. SAUSSY: That sums it up.

24 MS. VICTORY: Okay. Thanks. Any  
25 other questions?

□

1 MR. BEARY: You know, it is not only  
2 for FCC. I think in a disaster or catastrophic  
3 event, FCC should have somebody at the DHS command  
4 post. I think it also means that state and local  
5 people that are well trained in this area should be  
6 going to a DHS command post and operating like a  
7 major county sheriff or a major city chief.

8 They've got people that are  
9 trained in these areas, and they go to the  
10 Department of Homeland Security; and when you are  
11 ready to deploy personnel, then they get a tracking  
12 number. And those local people know how to deal  
13 with those local people.

14 So it has to be interchangeable, Local  
15 to State, State to Federal, and that's one thing  
16 that Sheriff Sexton and I have been talking about.  
17 I hate to say it -- we do a lot of that in Florida,

18 but we're not perfect. I will tell you I was  
19 browsing through the Presidential Report on  
20 Katrina. Very seldom is there anything talking  
21 about local participation, and, once again, we're  
22 alienating one from both state and local  
23 government. Well, this whole thing needs to be  
24 looked at in its overall entirety, not just on a  
25 federal level. And we got to quit worrying about

□

1 whose toes we step in or step on. We can step in  
2 that other stuff later.

3 But the bottom line is very simple.  
4 We got to get it done. We got to fix it because  
5 the next incident is just around the corner. We  
6 got to quit playing games. We got to quit pointing  
7 fingers. Let's get our heads in here, and let's  
8 get the dad burn thing fixed.

9 MS. VICTORY: Chief Dean.

10 MR. DEAN: Nancy, as a follow up on  
11 that, I think any type of event of this magnitude  
12 is going to overwhelm whatever community is  
13 affected. It doesn't matter where it is, and it's  
14 going to take everyone sitting at this table,  
15 representation from Local Government, from State  
16 Government, from Federal Government, from private  
17 industry, from the TV stations, radio stations, to

18 cellular telephone folks. <sup>FCC99</sup> It's going to take  
19 everyone to at least be able to communicate, which  
20 is the life blood to us providing services to the  
21 citizens and putting things back together.

22 And the key to that is to have  
23 representation, again, as the sheriff said, from  
24 the Locals at the state level, the State at the  
25 federal level, and for the companies to have

□

1 representation in our local EOC's, and the FCC to  
2 be sitting at least in Atlanta or in Region 5 or  
3 wherever to where they can help coordinate  
4 frequencies in a timely fashion to put these teams  
5 together because the DMAT teams and the USAR teams  
6 and -- teams and all those are coming together.  
7 Everybody's coming to the party, and we've got to  
8 be able to put those communications together to  
9 where you can coordinate your activities and you're  
10 not running over one another to where the companies  
11 can get their back bones back on line because we  
12 need them as much as anybody needs them as well as  
13 the public.

14 So we will certainly commit resources  
15 to help them get to where they need to be, but we  
16 all need to be in one location where we can  
17 communication with one another as all this is going  
18 down because we're going to be overwhelmed at best.

19 We've got to do that.

20 MS. VICTORY: Yes. Go ahead, Kelly.

21 MR. KIRWAN: We thank each of you for  
22 coming in. This is very valuable information.

23 In each of your presentations, there  
24 were several themes that came out, reliability,  
25 interoperability, operability, standards, IP,

□

1 planning, regionalization, policies. If these  
2 issues were fixed -- Dr. Saussy, I'll go to you --  
3 how would it have impacted you, what would have  
4 been different if you had the planning in place,  
5 the consolidated dispatch center that you now have,  
6 standards were in place, policies and procedures?  
7 How would that have impacted the end result?

8 DR. SAUSSY: Well, again -- and, you  
9 know, when you have something of this size, you  
10 know, maybe it would have been the gracefulness  
11 with, which we would done it. Maybe that would  
12 have been different, but I think we probably would  
13 have been overwhelmed.

14 But regardless of what community it  
15 was in, we just get to be the one that talks about,  
16 and it will be another community next time.

17 Let me tell you -- like, in the EMS  
18 community before the storm, we created something

19 called the Metropolitan Ambulance Council that  
20 involves all the regions, all the EMS services  
21 within our region. We met on a monthly basis, and  
22 we began -- we broke down our barriers and began to  
23 talk. It made a tremendous difference before the  
24 storm. It's made a tremendous difference during  
25 the storm, and it's made a tremendous difference

□

1 after the storm. We know each other. We call each  
2 other, you know, two, three times a day.

3           So if so and so says I need something,  
4 it's there in two seconds. So that is, on such a  
5 small scale, has worked so beautifully for us. I  
6 believe that if we brought that to every level, the  
7 communication level, the hospital level, the -- all  
8 the other -- the law enforcement level, the fire  
9 level, et cetera, I think that it would make a  
10 tremendous difference.

11           Now, it may not mitigate the magnitude  
12 of the disaster, but it would definitely the  
13 gracefulness with which we respond. So as long as  
14 we're all concerned about being graceful, I -- you  
15 know, I think that it's important.

16           And will it have draw backs?  
17 Absolutely. You can't plan for every disaster, but  
18 you can have systems in. But I will say again, if  
19 you do not have a clear leadership and a clear one,

20 single voice in the line of communication, it's all  
21 for naught.

22                   So we need to sit around a table.

23 Then we need to decide who's going to be the leader  
24 on Monday and what the message is going to be, and  
25 then that's the message that needs to go out.

□

1                   We can interface, overlay it onto  
2 every single level, communications, first  
3 responder, public safety, energy, sewage, and  
4 water. And, yes, they all need to be there, all  
5 the critical infrastructure, but we need to have a  
6 single voice in leadership to go with that.

7                   PANEL QUESTION: The same comments on  
8 the Next Generation 9-1-1 and being it is a  
9 standards-based IT type technology, is that  
10 critical in your beliefs moving forward on possibly  
11 a nationwide 911 type system?

12                   MS. HANSEN: Absolutely. We're here.  
13 We invited ourselves here with the help of a lot of  
14 good efforts underway, but with respect to  
15 regionalization especially and to dove tail on Dr.  
16 Saussy's comments on having a federal point of  
17 contact as well, my background is Local Government  
18 and State Government in California and Montana.  
19 And recognizing we all have these

20 geography-inherent challenges that are different  
21 from each other based on our region, whether we  
22 have an international border or mountainous ranges  
23 or urban centers or frontier America, we have  
24 challenges that differ across the United States.  
25 To have a regional point of contact

□

1 that understands those challenges, whether it's  
2 spectrum related or international border or coastal  
3 regions, I think those are very important from a  
4 vertical staff perspective and everybody  
5 understanding what those are so they can prepare  
6 for those and have a plan.

7 And especially with respect to having  
8 that plan, we're accustomed to receiving Homeland  
9 Security funding or any type of grant funding. Yet  
10 there is no restriction or parameter given State or  
11 Local Government to any significant degree in  
12 having a plan before you, one, receive the money  
13 or, two, spend the money, and we typically see this  
14 windfall from year to year; and I'm going to get  
15 lynched from my local government brethren.

16 But we continue to perpetuate the  
17 stove pipe process of infrastructure in particular,  
18 and it's vitally important that we get together  
19 with public and private partnerships and look at it  
20 more from a 50,000 foot view in preparing for that

21 unimaginable event, now more than ever.

22                   PANEL QUESTION: If I could continue  
23 that, this is something that my board has been  
24 looking at for a good while, and we're not working  
25 directly with the DOT on this. We just happened to

□

1 be doing the same thing, and I kind of informed  
2 them about it. The DOT is not funding our project,  
3 although we're open minded to that, Jenny.

4                   we have known for a long time that  
5 tandem architecture that we use has been a  
6 tremendous architecture through the years, but it's  
7 very dated; and it has limitations on there. And  
8 it doesn't take that type of system anymore to look  
9 at a telephone call and know where it belongs, you  
10 know. It can be done in Covington. It doesn't  
11 have to go to New Orleans to make that decision,  
12 for the system to do it.

13                   Themselves need to move forward on the  
14 technology. We think that what we are doing is the  
15 first step in it, but it's ready to work with the  
16 -- as they begin to move away from the tandem  
17 architecture; and if we had any doubts about  
18 whether or not we were too dependent on it,  
19 certainly, Hurricane Katrina brought that to the  
20 forefront.

21 IP technology seems to offer an awful  
22 lot for us. You can make changes much more  
23 quickly. It's generally less expensive because  
24 it's not hardware expensive. It's just  
25 preprogramming of computers and systems.

□

1 So from a local level, it's something  
2 we've been looking at for a good while, and we  
3 think that it will give us a lot more flexibility  
4 in making alternate plans when initial plan goes to  
5 pot on us during a storm.

6 So we're looking forward to what it  
7 can bring to us, but it is still very early in the  
8 development process.

9 MS. VICTORY: Steve Davis, you had a  
10 question.

11 MR. DAVIS: Yes. Dr. Saussy, there  
12 has been a lot of mention made about getting  
13 everybody together and getting around a table and  
14 working together, and, clearly, nobody would  
15 disagree that that's important and certainly one of  
16 the reasons we are here today.

17 As far as a recommendation that this  
18 panel might make, would you suggest that we hold  
19 summits, and would it be in each state or each  
20 county? How do you see us -- can you help guide us  
21 in formulating something that we might actually put

22 into a policy to make that happen for you? How  
23 would you like to see that happen, or what kind of  
24 thoughts do you have for how we would actually  
25 accomplish getting everybody together as you so

□

1 eloquently say is so important?

2 DR. SAUSSY: Well, okay. Let me think  
3 on my feet here, but, yeah, I think that -- I  
4 think, certainly, having a local discussion that  
5 then is taken to a state level. And then, again,  
6 do 100 of us need to show up at a state meeting? I  
7 mean, that level -- we all know that you don't get  
8 anything done when you put 100 people around a  
9 table.

10 So the Locals need to decide what they  
11 want, appoint one or two spokespeople, go and  
12 attend the state meeting, deliver the message.

13 State folks need to sit around and  
14 talk, identify one or two people, and send them to  
15 the federal level with one message.

16 So, again, I don't think it needs to  
17 be a, you know, big old production. I think it  
18 needs to be some well -- you know, articulate folks  
19 that have the information that want to deliver the  
20 message, and I think that sort of forum would be  
21 the most productive.

22 MR. DAVIS: Dr. Saussy, do you think  
23 maybe that the 50 representatives that would be  
24 appointed would be the right people to sort of  
25 start that process in each state? would that be

□

1 your understanding?

2 DR. SAUSSY: Well, you know, if we're  
3 talking about a communication -- I was talking more  
4 about, you know, emergency preparedness in general.

5 MR. DAVIS: Okay.

6 DR. SAUSSY: I was talking more about  
7 that, but, certainly, that can be -- you know, that  
8 could be translated to communications, and you  
9 could do -- you could use that model as we have  
10 well used other models that work on the  
11 communication front. I was talking more about from  
12 an emergency preparedness standpoint in general,  
13 and then that person -- you know, again, what's a  
14 good leader?

15 A good leader is somebody who is, you  
16 know, fairly intelligent but who admits that they  
17 don't know everything. They surround themselves  
18 with experts in communication.

19 I'm not an expert in communication.  
20 I'm an expert in emergency medicine, but I surround  
21 myself with people who pick up my deficiencies in  
22 running our system; and I -- you know, I would

23 think that any leader you chose would surround  
24 himself with a communication expert and a logistics  
25 expert and a planning expert and that that would be

□

1 the single voice.

2 MS. VICTORY: Thank you very much.

3 Any other questions for our panelists?

4 well, then, let me ask the last one.

5 Harlin, we had talked a little bit  
6 about the deployable systems, and looking at the  
7 systems, the local public safety systems as they  
8 are deployed right now, should those immediately or  
9 quick deployable systems to be used in the case of  
10 emergency -- is it sufficient to just have each  
11 local public safety agency make their own  
12 arrangements, or would it be better and a better  
13 use of funding for that quickly deployable system  
14 to bridge across a number of public safety agencies  
15 in a region; and is that where we should be putting  
16 our focus or our emphasis?

17 MR. MCEWEN: The local agencies have  
18 to do the actual arrangements, but the problem is,  
19 if they are not available and they don't know where  
20 to turn to to get any of this, that's the problem.

21 You know, most of these deployable  
22 systems -- like I said, there are some available.

23 They're limited, and when you're talking about  
24 long-term outages of systems, it's like the doctor  
25 had said earlier, I mean, when your -- when

□

1 everything basically isn't working, you've got to  
2 have something that will work temporarily until you  
3 can get your regular infrastructure back up.

4               So, you know, from my perspective, we  
5 don't have that strategy at the moment on a  
6 national basis. There were some prepositioned  
7 equipment plans. There was a program for that that  
8 had some communications ability in it. There are  
9 some of those units around, and they were utilized  
10 in this -- in this particular event; but the  
11 problem is that we probably need more of them and  
12 we need to have them strategically located where  
13 they can be easily deployed.

14               Nextel, I know, for instance, has  
15 theirs set up strategically around the country. I  
16 think some of the other cellular companies do, and  
17 they also have some of those set up so they can put  
18 them on a cargo plane at Dulles Airport, take them  
19 wherever they need them.

20               So we need to have a little bit more  
21 planning for that. Once that's in place, then the  
22 locals need to know that they are available and who  
23 do you call to get them when you need them.

24 MS. VICTORY: So not just the  
25 availability, but also the preplanning so folks

□

1 know what is --

2 MR. MCEWEN: Right.

3 MS. VICTORY: -- coming in. They are  
4 trained to use them, and you know who gets them for  
5 distribution purposes.

6 MR. MCEWEN: Right. And they have to  
7 be training with those units. I mean, those have  
8 to be deployed and used in the local areas from  
9 time to time in exercises and so on.

10 It's just not very good to try to  
11 bring something in. I mentioned the satellite  
12 problems. I mean, big problems occur when you try  
13 to come in with something and plug it into the  
14 local system and you don't know anything about the  
15 local system.

16 We're working by the way right now  
17 with the Department of Homeland Security to develop  
18 a strategy for a new communications training  
19 program for people to work in these kinds of  
20 situations. Every -- Florida really does it quite  
21 well. Again, you know, like the sheriff says,  
22 they're not perfect, but they're close to it; and  
23 so I like to compliment them.



25 Mississippi in a rapid deployment.

□

1                   we have what is called push packets  
2 that right after Katrina, we started getting the  
3 information of needing additional medication,  
4 additional medical supplies that were needed in our  
5 affected areas over a large area, and our state  
6 health officer then requested from the Federal  
7 Government that we receive the push packet from the  
8 next Strategic National Stockpile which then gives  
9 us within 72 hours, within three days, we started  
10 receiving this equipment to Mississippi.

11                   PANEL QUESTION: We made good  
12 utilization of that, and I would just suggest to  
13 the panel that that concept could work with  
14 communications equipment as well.

15                   MR. PARKER: Absolutely.

16                   MS. VICTORY: Thank you very much.

17 Kay Sears.

18                   MS. SEARS: If I could comment on Mr.  
19 McEwen's statement there, many of the people, the  
20 companies represented around the table had people  
21 ready to deploy with equipment. They could not get  
22 access to the region.

23                   So I would like to know what the panel  
24 thinks about that situation. We've talked in our

25 subcommittees about a first responder credentialing

□

1 system, what agency should manage that system, does  
2 it need to be at the federal level, the state  
3 level.

4                   Maybe if Mr. McEwen and if Dr. Bogucki  
5 could comment on that.

6                   MR. MCEWEN: I'll start. First of  
7 all, we have to have a national strategy for  
8 credentialing. I'm not quite sure how that will  
9 play out because, as you know, I mean, we are in a  
10 debate at the national level on national ID cards  
11 and all kinds of things that deal with privacy.

12                   So it gets kind of complicated, but we  
13 need to have a national strategy for credentialing  
14 for all kinds of activities. You know, I heard  
15 from Motorola and May Com and a lot of the other  
16 companies that they couldn't get into the area to  
17 support -- you know, to get the facilities back up  
18 and running. I'm sure that Dr. Saussy will tell  
19 you similar stories.

20                   So, number one, you have to have  
21 something that identifies these people as being  
22 authentic, and, secondly, you have to have some  
23 kind of a communications system that allows that to  
24 be managed.

25                   when they got to these checkpoints,

□

1 the checkpoints didn't have any communications with  
2 the internal people in New Orleans or others to  
3 say, do you want me to send you these people, you  
4 know what I'm saying.

5                   So it's a very complex problem. So we  
6 do need to address that.

7                   DR. BOGUCKI: From our standpoint, one  
8 of the most important lessons that we learned from  
9 headquarters in Washington was that when we are  
10 trying to send people, even when we're sending Feds  
11 who are fully credentialed and who we were taking  
12 full responsibility for, we were -- we had to  
13 delay, and we personally took responsibility for  
14 delaying deploying them for days and in some cases  
15 well over a week until we were able to find a safe  
16 place for them to sleep, fuel for their vehicles,  
17 safe food or a source of safe food, and armed  
18 protection because most of the places where we  
19 needed to send people -- and that would certainly  
20 be true of communications -- where there was  
21 complete destruction of the infrastructure, there  
22 were no hotels. There was no safe food. There was  
23 lawlessness.

24                   And so one of the most important  
25 reasons for people being kept out of that region

□

1 was not credentialing nearly so much as safety from  
2 our standpoint.

3                   And so that's clearly something that  
4 in the master plan has to be worked out as well as  
5 credentialing, which the credentialing piece, while  
6 it's thorny and is being worked out in a number of  
7 different federal agencies for fire fighters and  
8 for other medical responders, it's going to be true  
9 for everyone that those other issues are even more  
10 important.

11                   MR. MCEWEN: You have to realize,  
12 during that -- also, we were being slammed by  
13 freelancers, people just piling up at those  
14 checkpoints wanting to come in, and they have the  
15 answer to every one of your problems. Every one of  
16 them do.

17                   I know a lot of people in the  
18 communications area, every vendor that knew me, was  
19 calling me. They have the latest product that they  
20 were going to bring down. It was going to fix all  
21 our communication needs. It was going to tie  
22 everything together.

23                   And so it gets back to the  
24 credentialing thing. Even things as simple as  
25 personnel, as help, I needed help answering those

□

1 telephones, the 911 phones. I had a team in North  
2 Carolina, a trained team of 20 people, that could  
3 come down there and do that, and it took me a week  
4 to get them through the bureaucracy to get them  
5 there; but I was getting constantly hit by people  
6 that were saying, I'll take a week off; I'll take  
7 vacation; I'll come down and do these things for  
8 you.

9                   But I couldn't bring them down because  
10 I couldn't manage them. I couldn't house them,  
11 like she was saying. Where I was housing people  
12 was in a jail, and I don't want to bring people in  
13 and put in a jail if they don't realize what  
14 they're coming into and things. It just becomes a  
15 real issue.

16                   So it is a matter of organizing ahead  
17 of time so that these teams -- because we  
18 desperately need those teams you're describing.  
19 It's just hard to pick them out of all the other  
20 people that's lined up at that checkpoint.

21                   PANEL COMMENT: Ms. Victory, if I may  
22 make a comment on that, you are absolutely right.  
23 One of the problems was not only that your folks  
24 weren't getting in, there were police officers  
25 being turned around. There were groups that had

□

1 EMAC agreements, and EMAC is another thing that is  
2 being looked at, the Emergency Management  
3 Assistance Compact, how long it took to get it into  
4 Mississippi or into Louisiana; but this is --  
5 you're absolutely right. It's an issue that needs  
6 to be looked at, and it all comes down to, as this  
7 panel has said, the preplanning aspects, just  
8 another thing we need to add.

9 MS. VICTORY: I want to thank the  
10 first group of speakers. We are now just about at  
11 12:15, and we are going by this clock, not that  
12 one. This is the real time.

13 But I want to thank this group. This  
14 was a great kick off for our morning and thank my  
15 panelists for all their very good questions.

16 We are going to take an hour and a  
17 half break for lunch. Be back here and starting at  
18 1:45. I don't believe the cafeteria at the  
19 facility is open. We do have box lunches for the  
20 panel members, but, unfortunately, I think the  
21 other folks, if they are looking for lunch, are  
22 probably going to have to hit some of the fast food  
23 joints down the road.

24 But I look forward to y'all coming  
25 back here at 1:40 to continue on with this very

□

1 good discussion. So thank you very much.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

□

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

PANEL 2

Call to Order and Opening Remarks  
Nancy J. Victory, Chair of the Independent  
Panel

We are continuing day 1 of our Katrina panel meeting today. I would like to go ahead and welcome our second group of speakers who are ready to enlighten us with their experience and their experience.

Speaking on the second panel of speakers is Bruce Deer, the President of the American Association of Paging Carriers; Vincent D. Kelly, the President and Chief Executive Officer of USA Mobility; Jay Monroe, the Chairman and Chief Executive Officer of Global Star, LLC; Wanda Montano, Vice President, Regulatory and Industry Affairs for US LEC; and Greig Prejean, Operations Manager of Xspedius Communications, LLC.

Just as we did this morning, I'm going to ask all of our speakers to make a presentation, no more than ten minutes, and then we will open it up to questions from the rest of the panel.

So if I could start with Mr. Deer.

□

1

2 Bruce Deer, President, American Association  
3 Of Paging Carriers

4

5 Thank you. First, I want to introduce myself,  
6 I'm Bruce Deer and President of the American  
7 Association of Paging Carriers. That is a national  
8 trade association representing both the national,  
9 regional, and local paging carriers under FCC Rules  
10 Part 22, 24, and 90.

11 I also have a day job which is President of  
12 Skytel Communications which is a wireless paging  
13 and messaging company which is part of Verizon.

14 With that, what I would like to do is just start  
15 off with a little bit of a background about the  
16 paging industry. I will get to the points of how  
17 we believe that from a paging perspective and  
18 messaging perspective that it can really help with  
19 mission critical applications and first responders.

20 First, a note that there are still 10 million  
21 paging units active in the United States today.  
22 That's over 8 million in public networks and over 2  
23 million in private networks.

24 Also, know that the paging worked reliably both  
25 during 9-11, other major natural disasters, as well

□

1 as Hurricane Katrina. It worked as well as any  
2 type of communications technology that was out  
3 there. And we also realize that today, still, with  
4 all of the advent of all the other communications  
5 methods of electronic forms that hospitals still  
6 use predominantly pagers for emergency  
7 communications to reach their doctors and their  
8 emergency medical staffs.

9 Now you would ask the question, why would you  
10 still use pagers. Pagers, while it is not a fancy,  
11 current, viewed in the industry or viewed out there  
12 in the public as a current state-of-the-art type of  
13 application, it is a very reliable delivery  
14 mechanism for messages, both messages in general,  
15 short messages, whether it's alpha numeric short  
16 messaging, whether it's numeric, or whether it's  
17 two-way communications with two-way devices.

18 They are also good at penetration of buildings  
19 and having communications in the interior of  
20 structures based on the way the technology works so  
21 that the fact that when you're using a paging  
22 technology down in the middle of a building, down  
23 in the bowels of the building, in the basement, in  
24 the IT centers, and operating rooms, the pager  
25 technology is still work, whereas a lot of the

1 newer technologies may work or they may not work.

2 But when you're looking at mission-critical  
3 applications, you cannot stand the may work or may  
4 not work effectiveness of that. Also, when you're  
5 looking at using this type of wireless technology  
6 in the paging, you're looking at battery life.  
7 Typically, a running battery life, measuring it in  
8 weeks sometime and even months, not hours and days,  
9 which in a case of mission critical applications is  
10 important, especially when we look at natural  
11 disasters where recharging cell phones or  
12 recharging other type of wireless devices can get  
13 to be a problem as well as just generally  
14 availability to power if it is a piece of a gear  
15 that needs connectivity to the actual power grid.

16 It's also an advantage in the paging technology  
17 that we can do broadcast alerting. We can send a  
18 single message out to tens of thousands, hundreds  
19 of thousands, or even technically to millions of  
20 pagers at the same time with a single message which  
21 is a very powerful thing, especially in first  
22 response and alerting to get the same message out  
23 to a big group of people at one time in a  
24 cost-effective manner.

25 And then last, but not least, is that it is a

1 tested and mature technology. There's no need to  
2 reinvent the wheel for something that can send out  
3 broadcast messaging or get reliable short messages  
4 out there to your first responders in mission  
5 critical applications.

6 So it brings me back to, why should the Katrina  
7 Panel -- why should everybody consider using paging  
8 for mission critical applications. Well,  
9 summarized, it's because of the strength. It is  
10 reliable. It is economical. It is fast. You can  
11 get messages, you know, in the order of seconds  
12 from the time that it hits or somebody is trying to  
13 send it until it's actually received on the device.  
14 You're talking seconds, not minutes, definitely not  
15 hours, but in the order of seconds, and as I  
16 mentioned previously, there is this group call  
17 feature of this broadcast where you can send one  
18 message out to literally tens of thousands of  
19 devices.

20 And so from looking at it from that perspective  
21 -- and I will say, representing the paging industry  
22 and then, I think, Vince will talk about  
23 specifically in his company, but that we believe  
24 that this is a great method for the very first  
25 responders immediately -- to be used both before,

1 during, and immediately after a natural type of  
2 disaster has happened with Hurricane Katrina.

3 If you go in and you look at how the networks,  
4 the paging networks, work, both the national, the  
5 regional, and the local carriers, after Hurricane  
6 Katrina -- granted, everybody had damage site where  
7 it was -- damage sites, whether it was the paging  
8 carriers, whether it was the cellular carriers.  
9 Everybody had damaged sites.

10 But the way the paging technology worked, we  
11 were able to get our service restored quickly  
12 because, quite frankly, in a paging network, you do  
13 not have to have every transmitter and every  
14 receiver up for the paging network to continue to  
15 function.

16 So while we lost power, while we lost site, we  
17 were still able to keep the paging networks up and  
18 running at least in some type of a degraded mode  
19 during the hurricane and immediately thereafter and  
20 were very quickly restored to their full  
21 capabilities within a matter of days, not weeks or  
22 months.

23 If you will look at this, it is also inherent in  
24 the technology the fact that we can lose of the  
25 transmitters on a one-way system, lose some of the

1 transmitters and the receivers in a two-system and  
2 still have the network work.

3 Although it may be in a degraded method, it is  
4 still getting communications out there, and if you  
5 look at what happened in Hurricane Katrina, a lot  
6 of the paging carrier networks that were in the  
7 impacted areas were still working immediately after  
8 the aftermath.

9 Now, we did have the issues, as everybody did,  
10 with logistics, with gasoline, whether it's  
11 gasoline, propane, or natural gas; for the  
12 generators, lack of power, lack of  
13 telecommunications circuits in some cases which,  
14 quite frankly, some of the networks, you saw that  
15 48 hours later was a more critical time than  
16 immediately afterwards because of the issue of  
17 logistics of having power for the generators or  
18 gasoline or fuel for the generators.

19 But another key point to make about the paging  
20 networks is traditionally or predominantly the  
21 systems are connected via satellite. So what you  
22 have is a terrestrial network with paging  
23 transmitters and receivers, but they're connected  
24 via satellite connectivity.

25 So we're not as connected to or dependent on the

1 landline connections in the impacted area.  
2 Granted, there may not be some local telephone  
3 access, but that's easily overcome either with 800  
4 service being terminated out of other parts of the  
5 country or with preplanning, which the various  
6 carriers did, to be able to move those local  
7 numbers to other paging terminals around the  
8 country to support the application.

9 Now, let me talk you through just real quickly a  
10 couple of specific examples of things that occurred  
11 both in other disasters, not Hurricane Katrina --  
12 this was specifically 9-11 -- but testimony to the  
13 use of paging, and I'll reference the Arlington  
14 County action report from September 11 terrorist  
15 attacks from the Pentagon and quote, almost all  
16 aspects of communications can be problematic from  
17 initial notification to tactical operations.  
18 Cellular telephones were of little value in the  
19 first few hours. The cellular access is not  
20 provided. Radio channels were initially over  
21 saturated, and interoperability problems among  
22 jurisdictions and agencies persist.

23 Pagers were cited as the most reliable means of  
24 communication, and they even recommended that every  
25 fire fighter and EMS responder should have a pager

1 to receive dispatch notices both on shift and off  
2 shift. Pagers were also cited as, quote, the most  
3 reliable recall devices for first responders.

4 And then more recently, a communications  
5 specialist employed by FEMA in the urban search and  
6 rescue in the aftermath of Hurricane Katrina  
7 quoted, the cell and data service was down and  
8 systems being flooded. The reflex, which is  
9 two-way paging, is working fine, and communications  
10 are flowing through the units. Again, the use of  
11 reflex, which is two-way paging, as in all disaster  
12 situations, and has been working both with 9-11,  
13 Ivan, Isabel, and now with Katrina.

14 So if you go and you look at some of those  
15 specific applications and specific instances where  
16 paging was still providing a critical service --  
17 while we recognize the need for the cellular  
18 service, the satellite service, wireless Internet  
19 services that will occur after that, we believe  
20 that the paging technology and the capabilities  
21 that are offered with it is both a cost effective  
22 and economical and easy-to-support system to  
23 provide for mission critical applications and first  
24 responders.

25 If you look at it from a paging infrastructure

□

1 standpoint, the logistics are easier to support.

2 Transmitters do not require as much power as some  
3 of the other systems for getting fuel to them to  
4 the sites, to keep power.

5 As I mentioned, the satellite communications  
6 provides for the fact that you do not need the  
7 terrestrial networks for the back haul so that with  
8 all of that put together, it says that in the first  
9 few hours to days after a natural disaster -- it  
10 doesn't even have to be the size of Hurricane  
11 Katrina -- that a paging solution is a very good  
12 solution for that.

13 So if I can just in summary, if you will look at  
14 it, paging is very reliable. It provides mission  
15 critical notification that you will get the  
16 messages and you will get them on time.

17 It's very economical. We're not talking  
18 something that's hundreds of dollars a month to  
19 support. You're talking in the handful of dollars  
20 a month. It is fast. You get timely  
21 communication, and you can send broadcast  
22 subscriber to literally tens of thousands to get  
23 information out in a very quick manner. Thank you.

24  
25

□

2 Thank you very much.

3

4 Vincent D. Kelly, President and Chief Executive  
5 Officer USA Mobility

6

7 Thank you. My name is Vincent Kelly, and I'm  
8 the President and Chief Executive Officer of USA  
9 Mobility, the nation's largest provider of paging  
10 services.

11 I have been with the company and its  
12 predecessor, Metrocall, for 19 years, and I  
13 understand well the communications issues that  
14 arise during times of emergency. I am very proud  
15 of our performance during Hurricane Katrina, and I  
16 appreciate the opportunity to share with the panel  
17 USA Mobility's experiences and observations.

18 I will describe the many advantages that basic  
19 paging technology offered during Katrina relative  
20 to other more expensive forms of wireless  
21 communication. I will then offer some ideas about  
22 how the telecommunications industry and government  
23 agencies can enhance our collective ability to  
24 respond to hurricanes and other emergency  
25 situations in the future.

□

1 USA Mobility was formed in late 2004 by the  
2 merger of Arch wireless and Metrocall Holdings,  
Page 131

3 then the nation's two largest independent paging  
4 and wireless messaging companies. We provide  
5 traditional numeric and alpha numeric or text  
6 messaging paging services as well as advanced  
7 two-way text messaging services.

8 while the mass market for paging services has  
9 declined in recent years as mobile phone users have  
10 increased, paging devices continue to play a  
11 critical role for first responders and are still  
12 used extensively by police officers, fire fighters,  
13 rescue workers.

14 In addition, hospitals and health clinics as  
15 well as government agencies rely heavily on paging  
16 services. USA Mobility also serves over 80 percent  
17 of the Fortune 1000.

18 The reasons for this continued use of paging by  
19 these mission critical organizations is simple and  
20 straightforward. Number one, paging's low cost  
21 relative to mobile telephony; number two, paging's  
22 reliability due to our simulcast networks and long  
23 battery life; number three, paging's network  
24 ubiquity where USA Mobility maintains the largest  
25 paging network in the United States.

□

1 Our paging network reaches over 90 percent of  
2 the U.S. population including the largest 100

3 markets and more than 1,000 cities overall. As of  
4 September 30th, 2005, USA Mobility provided service  
5 to over 5.1 million messaging devices.

6 USA Mobility provides these services through a  
7 network architecture that combines digital  
8 satellite transmission with an expensive system of  
9 terrestrial transmitters and paging switches. An  
10 important distinction is that paging's back -- is  
11 satellite based and our transmitters are typically  
12 resistant to land line failure that can interrupt  
13 mobile phone transmissions during times of  
14 emergency.

15 Our transmitters are located on the tops of  
16 buildings or on towers high off the ground, often  
17 at the 300 to 400 foot level. We broadcast at  
18 power levels in the 3500 watts effective radiated  
19 power range or ERP, and that is contrasted to  
20 mobile phone transmitters who typically have their  
21 antenna around 100 feet off the ground and  
22 broadcast at about 90 watts ERP.

23 Multiple ground-based paging transmitters in a  
24 given network area receive messages from the  
25 satellite and broadcast the information in a

□

1 simulcast fashion to individual pagers through our  
2 high-powered transmitters. This simulcast  
3 technology, using multiple high powered

4 transmitters to send the same message to a single  
5 pager allows USA Mobility to provide a wide  
6 coverage area and strong in-building penetration.

7     what this means is that a paging user may be  
8 near a transmitter that has been knocked off the  
9 air due to high winds or loss of power, but unlike  
10 other technology who need the local transmitter to  
11 be working, there's a high probability that the  
12 paging user can still receive the message as it is  
13 being broadcast to other transmitters many miles  
14 away at very high power.

15     Carter C. Blumeyer, a communications specialist  
16 with FEMA, during Hurricane Katrina reported his  
17 experience with paging and the Reflex technology  
18 protocol we deploy on our two-way networks to an  
19 industry newsletter, quote, I am with an urban  
20 search and rescue for FEMA and with the cell and  
21 data service down and systems being flooded, Reflex  
22 is working fine, and communications are flowing  
23 through the units. we are allowing people to send  
24 e-mails to loved ones to let them know they are  
25 alive and well.

□

1     Our customers at Women's Hospital and Tulane  
2 Lake Side Hospital also praised our performance.  
3 One customer told us, quote, pagers were used by

4 the medical staff for communicating with the  
5 doctors and nurses in transporting the moms and  
6 babies from one facility to another.

7 Text messaging was the only way to get critical  
8 messages out to the doctors and nurses since phone  
9 lines were all down or all circuits busy, end  
10 quote.

11 USA Mobility was the first vendor to contact the  
12 hospital and supply the facility with back-up  
13 emergency response equipment. And Tulane report  
14 that, quote, it wouldn't be economically feasible  
15 for a facility the size of Tulane to provide  
16 cellular service to all their essential employees.  
17 So we depend on USA Mobility to provide us with a  
18 dependable means to stay in contact with our  
19 employee that is cost effective. Your  
20 dependability became more evident when other  
21 cellular and paging providers lost service after  
22 Hurricane Katrina and your service is still going,  
23 end quote.

24 My written testimony describes in detail how USA  
25 Mobility prepared for the arrival of Hurricane

□

1 Katrina and how we responded quickly to restore  
2 operations. In brief, before the storm hit, we  
3 tested our systems extensively. We deployed  
4 critical personnel to strategic locations armed

5 with equipment necessary to rebuild transmitter  
6 sites, and we established back-up systems to  
7 supplement our network's inherent redundancy.

8 These steps enabled us to restore service  
9 throughout the Gulf Coast, including in New  
10 Orleans, within a few days. Our reliable network  
11 technology together with careful planning helped us  
12 minimize service disruption for critical personnel.

13 Before we conclude, I would like to say a few  
14 words about how we can improve our preparedness for  
15 emergency situations. Much has been written or  
16 said about improving public safety interoperability  
17 for voice communications over hand-held radios, and  
18 this should continue to be a priority since voice  
19 communications obviously plays an important role in  
20 any emergency response; but we must be careful not  
21 to let that discussion overshadow the public  
22 safety benefits offered by less prominent, but  
23 valuable technology like paging.

24 USA Mobility believes that paging is the most  
25 affordable, redundant, and reliable emergency

□

1 communications solution available today. I,  
2 therefore, encourage the panel to give paging  
3 services due consideration. Simply stated, paging  
4 should be a required form of communication for all

5 federal, state, and local emergency service  
6 personnel.

7 One of the purposes of this panel is to examine  
8 how the telecommunications industry might better  
9 serve first responders such as police, fire  
10 fighters, and emergency medical personnel. We  
11 already know that pagers are widely used by these  
12 groups. Pagers are also used by federal, state,  
13 and local government organizations in need of an  
14 emergency communications system that provides rapid  
15 messaging for one-to-one and one-to-man  
16 communications where voice is not required or  
17 message content is sensitive to eavesdropping.

18 Additionally, several governmental agencies have  
19 expressed an increased interest in utilizing paging  
20 in light of the failure of other communications  
21 during Hurricane Katrina. It's important that we  
22 consider how we can continue to make sure of this  
23 technology to provide our first responders and  
24 government organizations with critical emergency  
25 information.

□

1 Another goal is improving the communication of  
2 emergency information to the general public. USA  
3 Mobility endorses the Commission's objective of  
4 strengthening and expanding the emergency alert  
5 system. The Commission has noted that the expanded

6 EAS should be redundant; that is, it should  
7 facilitate the distribution of emergency  
8 information over a variety of communications media  
9 and platforms.

10 A redundant system should incorporate paging  
11 technology. USA Mobility looks forward to  
12 participating in such a system so members of the  
13 general public can receive timely alerts as many  
14 networks -- over as many networks as possible  
15 including not only broadcast, DBS, and cable, but  
16 also paging and other wireless networks.

17 USA Mobility also urges the Commission to  
18 recharter the Network Reliability and  
19 Interoperability Council or NRIC. NRIC has played  
20 an important role in advising the Commission on the  
21 interoperability and interconnectivity of public  
22 telecommunications networks on such topics as  
23 homeland security and E911.

24 We believe that reconvening NRIC would assist  
25 the Commission and all telecommunications providers

□

1 in the cooperative effort to improve emergency  
2 preparedness.

3 Finally, allow me to offer a few practical  
4 suggestions for the panel. First, the panel should  
5 consider methods of improving the access by

6 technicians to communications facilities needing  
7 repair immediately after a disaster, especially  
8 those supporting search and rescue or medical  
9 relief efforts.

10 Second, to better respond to a loss of  
11 commercial power, the panel should pursue a  
12 public/private partnership to establish  
13 strategically located, secure rooftop disaster  
14 locations with emergency power and access to  
15 adequate fuel reserves.

16 Third, the panel should work with the Department  
17 of Homeland Security and FEMA to advocate better  
18 communications responders and service providers and  
19 allow telecommunications providers to either place  
20 temporary coverage trailers in their agency staging  
21 areas or a coordinated safe location which would  
22 improve the wireless access for both the Government  
23 and the affected community.

24 In summary, USA Mobility is proud of our  
25 network's resiliency and our contribution to the

□

1 restoration of communications in the area. We  
2 commend the work of this panel and look forward to  
3 partnering with other communications providers to  
4 learn from this disaster and to improve our ability  
5 to respond to any future emergencies that our  
6 nation may face. Thank you.

7

8 Nancy J. Victory, Chair of the Independent Panel

9 Thank you very much.

10

11 Jay Monroe, Chairman and Chief Executive Officer

12 Globalstar, LLC

13

14 Thank you, Chairwoman Victory, and distinguished  
15 members of the panel. I appreciate the opportunity  
16 to appear before you on behalf of Globalstar today.  
17 Globalstar is one of the original "Big LEO" mobile  
18 satellite systems licensed by the FCC more than a  
19 decade ago.

20 Like the rest of the telecommunications  
21 industry, we suffered through the doldrums of the  
22 business recession in 2000, entered bankruptcy in  
23 2002, and the pundits, the wireless industry, and  
24 even many of the regulators gave us up for dead.

25 Our loyal and dedicated employees and,

□

1 importantly, our customers did not give up on us.  
2 Because we provide a unique suite of products and  
3 services which Government and industry have come to  
4 rely upon in the remote areas of the globe and  
5 during emergencies that routinely disable  
6 terrestrial wireline and wireless communications

7 for a period of time.

8 We all know that Hurricane Katrina was an  
9 extraordinary event with an unusually disruptive  
10 impact on the land-based telecommunications  
11 infrastructure. We also know that the government's  
12 response to this emergency was not acceptable to  
13 the public nor to the elected officials.

14 My presentation today will address Globalstar's  
15 response to the emergency as well as  
16 recommendations to ensure a faster and better  
17 coordinated response when the next such event  
18 occurs. In the aftermath of Katrina, Globalstar  
19 was one of a very small number of  
20 telecommunications companies serving the Gulf Coast  
21 Region whose services were not disrupted. We are  
22 one of only two FCC-licensed companies that  
23 currently provide mobile satellite services or MSS  
24 using battery-powered hand-held and vehicle-mounted  
25 phones.

□

1 Our satellites serve the Southeast United States  
2 with the aid of satellite earth stations near Waco,  
3 Texas, and Sebring, Florida. Because our  
4 constellation is located 850 miles above the  
5 earth's surface, the customers in the Gulf Coast  
6 area were able to obtain uninterrupted service even  
7 while all other terrestrial communications in the

8 area were unavailable.

9 Much of the debate among telecommunications  
10 policy makers following Katrina concerned the lack  
11 of interoperability among proprietary radio systems  
12 used for state, local, federal, police, fire  
13 rescue, and other emergency assistance agencies  
14 collectively referred to as first responders.

15 The lack of interoperability is indeed a problem  
16 that these agencies and the state and federal  
17 regulators have been attempting to solve for years.  
18 However, the lack of interoperability was not an  
19 impediment for those agencies which had satellite  
20 phones at their disposal after the hurricane.

21 This is because satellite phones which use  
22 globally-allocated radio spectrum and which do not  
23 rely upon terrestrial infrastructure to function  
24 are operable with any other satellite phones and  
25 with any other device connected to the public

□

1 switch telephone networks or to wireless networks  
2 anywhere.

3 Unlike some other options, satellite phones are  
4 not an expensive solution often costing only a few  
5 hundred dollars each.

6 If I may, I would like to summarize briefly  
7 Globalstar's actions before and immediately after

8 Katrina came to shore. In advance of Katrina, we  
9 prepositioned a phone inventory to strategic  
10 locations such as Baton Rouge. Secondly, we  
11 re-allocated the coverage footprints of the Texas  
12 and Florida earth stations to increase the capacity  
13 into the Gulf Coast region; and, third, we prepared  
14 our network operations team to monitor usage  
15 patterns in real time in order to manage the  
16 anticipated traffic increase effectively.

17 Immediately after the hurricane moved out of  
18 Louisiana and Mississippi, we took several steps.  
19 First, within 24 hours, we increased the available  
20 network capacity in the area by 60 percent.  
21 Secondly, we donated 100 phones each to the  
22 Governors of Louisiana and Mississippi. Third,  
23 within about a week, we activated and deployed  
24 roughly 10,000 additional phones to FEMA and other  
25 state and federal agencies. Fourth, we activated

□

1 and deployed some 2,000 simplex data terminals so  
2 that FEMA and other agencies could reliably track  
3 their mobile and fixed assets like generators and  
4 trailers.

5 we doubled the capacity for Globalstar calls to  
6 landlines. Continuously, we reallocated ground  
7 station capacity and coverage to maintain service  
8 quality in the Gulf Coast region.

9 we developed, manufactured, and sent to FEMA  
10 four transportable emergency communications systems  
11 which mate GSM phones with Globalstar fixed phones  
12 and use satellite backhaul to create  
13 self-contained local area networks.

14 Even though Globalstar's use increased a  
15 staggering 566 percent in the week following  
16 Katrina compared to the week preceding, we were  
17 able to maintain a quality of service and ensure  
18 that FEMA and other first responders had  
19 uninterrupted communications capability.

20 why were we able to do this?

21 Simply, it was because we were prepared for it.  
22 I don't mean to imply that everything worked  
23 perfectly. No company government agency can  
24 anticipate each potential point of failure during  
25 a calamity, and even if they could, the cost of

□

1 designing hardware and software and preparing  
2 ourselves for the unthinkable could be cost  
3 prohibitive.

4 we design our equipment and procedures to work  
5 properly, but it doesn't mean that we cannot take  
6 steps to reduce any points of failure. With this  
7 in mind, I would like to share with you  
8 Globalstar's observations and recommendations based

9 upon our experience not only with Katrina, but also  
10 with Wilma some weeks later and with a series of  
11 five hurricanes that struck Florida just one year  
12 before.

13 First, we found that some first responders who  
14 had the foresight to stock satellite phones and  
15 other communications equipment that was similar to  
16 it had not received adequate training in its proper  
17 use. The lack of training accounted for a sizeable  
18 number of communications failure during the first  
19 48 hours after the hurricane.

20 In some cases, first responders had simply  
21 failed to keep the handset batteries charged just  
22 as we at home might fail to keep fresh batteries  
23 and flash lights in the event of a power failure.  
24 Others did not realize that satellite phones  
25 require a clear line of sight between the handset

□

1 and the sky in order to function effectively.

2 So it's essential that first responders and  
3 emergency personnel receive proper training on the  
4 operation of satellite equipment in advance. There  
5 is no reason that such training cannot be organized  
6 for state, local, and federal first responders  
7 under FEMA. Globalstar is actively engaged in  
8 training and outreach initiatives with its public  
9 safety customers so that they are prepared when the

10 next emergency inevitably occurs.

11 Second, we found that the first responders  
12 generally did not have pre-emergency deployment  
13 plans that could be invoked in advance of the  
14 actual emergency. As a result, Globalstar had  
15 difficulty determining where to send phones and  
16 other equipment for staging into disaster areas.  
17 Only through repeated contacts with FEMA and other  
18 officials were we ultimately advised to send our  
19 equipment to staging areas, primarily Baton Rouge.

20 In order to avoid this problem in the future, it  
21 is vital that the first responders, preferably  
22 through cooperation at both state and federal  
23 level, publish a plan to deploy operable equipment  
24 in advance of an emergency.

25 We also recommend that any such plan ensure that

□

1 military, for example, national guard, assistance  
2 to transport emergency communications equipment  
3 into the affected area faster and more efficiently.

4 Third, we found in most cases that although  
5 local and state first responders already had  
6 operable Globalstar phones for emergencies, they  
7 either did not know how to activate their service  
8 or did not have the funding readily available for  
9 it.

10 It's understandable that the first responders  
11 might not be able to secure budget approval to pay  
12 for multiple service subscriptions for phones that  
13 might not be used on a day in, day out basis.  
14 However, if the state, local, and federal agencies  
15 were able to improve their contracting methods and  
16 pool their emergency communications funding, they  
17 could share the cost statewide or even nationally,  
18 and emergency preparedness could receive volume of  
19 discounts for minutes of use.

20 Fourth, we found that the first responders often  
21 did not have the same state-of-the-art equipment  
22 that our large commercial customers enjoy. There  
23 are a number of relatively new solutions for first  
24 responders available from Globalstar and other  
25 satellite providers.

□

1 As I noted previously, at the urgent request of  
2 the FCC, Globalstar technicians developed,  
3 manufactured, and sent to FEMA four transportable  
4 emergency communications systems called picocells  
5 within about a week. This product is similar to an  
6 ancillary terrestrial component or ATC product that  
7 we intend to develop and which the FCC has  
8 authorized us to implement.

9 This small device allows standard cellular  
10 phones to operate over our satellites as if they

11 were sat. Phones. Other satellite-based products  
12 that could be of great value to the first  
13 responders include narrowband with video,  
14 solar-powered phones, and satellite backhaul  
15 infrastructure for these cell phones and other  
16 portable equipment.

17 State, local, and federal agencies and  
18 commercial operators must work together to develop  
19 and deploy new solutions for emergency  
20 preparedness.

21 In summary, we recommend that the first  
22 responders train the employees on the proper use of  
23 the equipment, deploy emergency equipment in  
24 advance of the disaster, work together to share  
25 resources and funding, and work with the industry

□

1 to procure and maintain state-of-the-art equipment.

2 That concludes my prepared statements, and I  
3 respectfully refer the panel to Globalstar's  
4 written statement submitted on January 2nd or 27th  
5 for additional detail on our response to Katrina.  
6 Thank you.

7

8 Wanda Montano, Vice President  
9 Regulatory and Industry Affairs, US LEC

10

11 Good afternoon. Thank you for the opportunity  
12 to make the presentation today on the experience of  
13 the competitive local carriers during Hurricane  
14 Katrina.

15 US LEC is a competitive carrier founded ten  
16 years ago, headquartered in Charlotte, North  
17 Carolina, with operations in 25 cities including  
18 all nine southeastern states.

19 We employ approximately 1100 sales, operational,  
20 and headquarters employees across our footprint.  
21 For those folks who don't live and breathe telecom  
22 rules and regulations, competitive carriers were  
23 authorized by the 1996 Telecom Act, and we operate  
24 in accordance with rules promulgated by the FCC and  
25 pursuant to interconnection agreements with the

□

1 incumbent phone companies.

2 We provide the full panoply of services, voice,  
3 data, frame relay, Internet, 911 connectivity, VoIP  
4 directory assisting, directory listing. We are a  
5 full service phone company.

6 As a telecom carrier operating in the Southeast,  
7 we experienced many of the same issues which were  
8 discussed at the January 30th meeting of this  
9 panel. For example, communications, knowing who to  
10 call to coordinate resolution of issues,  
11 coordination between telecom, power, and government

12 agencies, the need for security of personnel to  
13 escort our employees, designation as first  
14 responders so that we could get back into our site,  
15 delivery of fuel.

16 We had access to fuel from one of our customers  
17 who is a fuel company, but our issue was finding  
18 someone who could authorize them to come into our  
19 site.

20 Loss of outside plant for delivery of telecom  
21 services to the customer parim. Today we still  
22 have about 35 customers still out of service  
23 because of outside plant issues.

24 Loss of Bell South offices and their tandem for  
25 interconnection of calls between our customers and

□

1 those of Bell South and other customers and network  
2 congestion as a result of high call volume, but the  
3 CLECs experience was unique in several ways.

4 Nearly all of the CLECs operating in Louisiana  
5 and Mississippi also operate in other southeastern  
6 states. This means that we prepared for Katrina  
7 four days earlier and her effect on our Florida  
8 operations, especially Miami, West Palm Beach, and  
9 Fort Lauderdale.

10 As we were working through issues in Louisiana  
11 and Mississippi, we were simultaneously working

12 trouble tickets and restoring customers in Florida.  
13 For example, during Wilma, we worked 912 trouble  
14 tickets in Miami, 778 in West Palm, and 399 in Fort  
15 Myers.

16 As Katrina moved north into the interior, we  
17 also faced power outages and customer outages in  
18 Memphis, Birmingham, and other cities in the path  
19 of Katrina, now a tropical depression. Emergency  
20 preparedness authorities did not look for CLECs as  
21 an alternative for their communications.

22 For example, our facility in Metairie which also  
23 -- or Metairie -- I -- Metairie -- I'll get it  
24 right in a minute. I'm from Charlotte.

25 For example, our facility which also houses

□

1 back-up facilities for the local sheriff's  
2 department was fully operational. Just 200 foot  
3 from the staging area at the intersection of I-10  
4 and Causeway, our central office which served not  
5 only New Orleans, but also Baton Rouge and points  
6 in between, was not flooded. Our generator  
7 provided power to keep the office in service.

8 This 22-story building, the highest in Jefferson  
9 Parish, supports multiple antenna structures, and  
10 additional devices could have been added and  
11 connected to our central office.

12 The operation of this office and access to  
Page 151

13 our voice and data networks as well as the Internet  
14 was disrupted only by the order of the Jefferson  
15 Parish Sheriff's Department requiring us to power  
16 down our CO and evacuate our site on Wednesday,  
17 August 31st. This unnecessary powering down of our  
18 office, which we believe was a result of concerns  
19 about employee safety and site security, resulted  
20 in the loss of telecom services to the emergency  
21 teams who were housed in the Hyatt Hotel in  
22 Downtown New Orleans. They weren't real happy.  
23 Once we were allowed back into our site on  
24 Sunday, September 4, the switch was restored to  
25 served on Tuesday. We believe that had we not been

□

1 required to power down and evacuate, our central  
2 office would have remained operational throughout  
3 the disaster and avoided loss of communications  
4 capabilities for our customers.

5 Voice communications also remained available to  
6 the Katrina Emergency Center in Baton Rouge due to  
7 the connectivity of the competitive carriers  
8 networks. Approximately 50 percent of our  
9 customers were restored to service when their power  
10 was restored.

11 The regional nature of competitive carrier  
12 network architecture permitted calls to continue to

13 process. For example, again, except for this  
14 mandatory down period, any calls out of New Orleans  
15 were processed from our New Orleans site to our  
16 Atlanta regional switch for connectivity to the  
17 world, and since the location of our SS7 STP's and  
18 SEP's were also not in the affected area, this  
19 portion of our network also remained operational.

20 Interconnection of competitive carrier networks  
21 provided the ability to complete calls between  
22 customers on our respective networks. In Baton  
23 Rouge, for example, during our power-down period,  
24 we moved customers onto another competitive  
25 carrier's network so our Baton Rouge customers

□

1 remained in service, and upon return of our switch  
2 to service, we migrated those customers back.

3 Fifty percent of our customers had implemented  
4 back-up calling plans with us prior to Katrina as  
5 part of their normal business operations. These  
6 customers typically requested call forwarding  
7 before each hurricane landfall which permitted  
8 their back-up plans to be effectuated. The balance  
9 of our customers typically requested the call  
10 forwarding after landfall until all utilities and  
11 clean up had been stabilized.

12 During the restoration phase -- and this still  
13 remains a challenge -- customers have placed orders

14 with multiple carriers to simply see who can  
15 provide restoration first which is creating some  
16 contractual issues, but we are working closely with  
17 other competitive carriers to ensure that the  
18 customers are served regardless of whose network  
19 comes up first.

20 Lessons learned: There are multiple  
21 communication networks out there which could  
22 provide diversity.

23 So an inventory of telecom providers with  
24 contact information must be considered as part of  
25 this panel's work.

□

1 Thank you for the opportunity to speak. In  
2 closing, I urge the FCC and the panel members to  
3 consider the following: while Katrina was an  
4 absolute catastrophe for Louisiana and Mississippi,  
5 the entire southeastern portion of the United  
6 States is both hurricane and tornado alley.

7 2005 was an incredibly active storm season.  
8 Based on our experience dealing with Katrina first  
9 in Miami and South Florida as well as Arlene in  
10 Pensacola, Rita in Louisiana, and Wilma in South  
11 Florida, we have other states which are typically  
12 affected every year by hurricanes and tornadoes.

13 Two years ago, Ivan devastated western North

14 Carolina's mountains, and Verizon and other  
15 companies are still recovering from the damage from  
16 that storm. Five years after Hurricane Floyd,  
17 which parked itself over Eastern North Carolina and  
18 flooded much of Eastern North Carolina, we are  
19 still cleaning up.

20 So my passionate plea to this group is this:  
21 whatever rules and recommendations the group issues  
22 cannot be confined to only Louisiana and  
23 Mississippi. The recommendations must have  
24 applicability across the entire Southeast because  
25 next year's devastating storm could follow the path

□

1 of Hugo through North and South Carolina, Charlie  
2 across Central Florida, Andrew across South  
3 Florida, or Floyd and Fran through North Carolina.

4 I also would take this opportunity Nancy Victory  
5 and Marion Scott for permitting the competitive  
6 carriers to be working guests on two of the working  
7 groups of this panel. Thank you.

8

9 Nancy J. Victory, Chair of the Independent  
10 Panel

11 Thank you very much.

12

13 Greig Prejean, Operations Manager, Xspedius  
14 Communications, LLC

15

16 Thank you and good afternoon. On behalf of  
17 Xspedius Communications, LLC, submits these  
18 comments in response to the Independent Hurricane  
19 Katrina Panel's request for comments.

20 Xspedius Communications, LLC, is a competitive,  
21 local exchange carrier that offers local long  
22 distance and integrated communications services in  
23 over 20 states primarily across the South and  
24 Southwest.

25 Xspedius has deployed Class 5 local switches

□

1 throughout the area impacted by Hurricane Katrina  
2 including New Orleans, Lake Charles, Mobile,  
3 Birmingham, and Montgomery. Xspedius also offers  
4 communications services in Jackson, Lafayette, and  
5 Shreveport, Louisiana, owns and operates hundreds  
6 of miles of redundant fiber optic network from  
7 Tampa to Houston.

8 As an interested telecommunications carrier in  
9 the region, Xspedius attended the first panel  
10 meeting and has been working with the working  
11 groups to provide input from the CLECs' perspective.  
12 Xspedius offers the following comments on  
13 improvements that should be made based on the  
14 lessons learned from Hurricane Katrina prior to the

15 next hurricane season:

16 Issues relating to access for personnel and fuel  
17 to the impacted area -- like many of the  
18 telecommunication carriers, Xspedius personnel and  
19 contractors that Xspedius relies on were restricted  
20 from gaining access to our key facility locations  
21 during the aftermath of the hurricane. Xspedius  
22 offers redundant local facilities in markets,  
23 facilities which were relied upon by other carriers  
24 during the aftermath of Katrina. The access issue  
25 for Xspedius and other Louisiana CLECs, such as New

□

1 -- and network telephone is compounded by the fact  
2 that CLECs do not always have the same name  
3 recognition of larger utilities such as Bell South  
4 and Entergy.

5 Xspedius agrees with the many carriers that have  
6 argued that providing first responder status to  
7 communications providers is necessary. In  
8 addition, similar advance status should be provided  
9 to select pre-identified contractors, inside wiring  
10 contractors, fuel companies are examples that work  
11 closely with these companies.

12 with respect to Xspedius experience during  
13 Katrina, like other companies, Xspedius was able to  
14 operate its New Orleans switch off of back-up  
15 generators designed for such emergencies. Back-up

16 generators, however, require a steady stream of  
17 fuel, and it was access to such fuel that became  
18 one of the greatest challenges during this crisis.

19 On August 30th, the day after the hurricane made  
20 landfall in New Orleans, Xspedius personnel tried  
21 to get into New Orleans to join our New Orleans  
22 base personnel, were turned around in Baton Rouge.  
23 It was not until late the following day, August  
24 31st, that Xspedius was able to obtain the  
25 necessary passes.

□

1 The individuals to whom Xspedius made requests  
2 for emergency access were diligent and  
3 professional, but they were working within an ad  
4 hoc process that did not function smoothly, with no  
5 clear direction even as to which agency had  
6 authority to issue the necessary authority.

7 After two days of attempting to obtain the  
8 required Department of Transportation waiver to  
9 gain access to the highways, Xspedius ultimately  
10 obtained our DOT waiver from the Department of  
11 Homeland Security. While the fuel truck  
12 authorization came from DHS, the authority for the  
13 personnel accompanying the truck ultimately came  
14 from the incident commander with the Louisiana  
15 State Police who gave the final approval for the

16 fuel truck and personnel to enter.

17 Streamlined approval processes and pre-approve  
18 of certain individuals and companies would  
19 represent a significant improvement to the current  
20 process. Again, recognizing only the  
21 communications providers themselves will not be  
22 sufficient.

23 It will also be necessary to recognize as first  
24 responders certain designees of those companies,  
25 fuel providers, outside plant fiber repair crews,

□

1 general maintenance contractors, commercial  
2 electrical and air conditioning contractors, and so  
3 on. Ready access to these types of secondary  
4 contractors would have created additional network  
5 stability and permitted better focus on the  
6 technical telecom challenges at hand.

7 Hurricane Katrina brought many challenges in its  
8 wake including looting and sniper fire that added  
9 to an already chaotic situation. In order to gain  
10 access to New Orleans, Xspedius was able to piggy  
11 back on the armed escorts of another provider.

12 In general, however, government security is  
13 strongly preferred to private escorts which is no  
14 doubt the preference of government security forces  
15 as well. Local, state, and federal security  
16 escorts should be made available to escort private

17 communications companies to critical locations to  
18 the extent available recognizing that local, state,  
19 and federal forces were stretched thin and working  
20 night and day throughout the crisis.

21 As with the case of access issues, to the extent  
22 orderly government escort processes can be  
23 established in advance of a hurricane, they will  
24 work more smoothly in the midst of a crisis. These  
25 processes should include not only security escorts,

□

1 but also on-site security where necessary to  
2 protect communications facilities.

3 with respect to both access and security  
4 processes, communicating those processes to  
5 companies through our public sources such as web  
6 sites in advance of the next hurricane season will  
7 be critical. Coordinated web site with critical  
8 contact information and frequently asked questions  
9 are necessary to ensure streamless communications.  
10 Such web sites and information distribution should  
11 be closely coordinated as challenging as that may  
12 be so that information from local, state, and  
13 federal agencies provides a clear, consistent  
14 message to the public including communications  
15 companies.

16 Network and other telecommunications issues --

17 due to the overwhelming nature of Hurricane  
18 Katrina, Xspedius was not able to maintain  
19 continuous switch operations through every hour of  
20 the hurricane. Xspedius outages were intermittent,  
21 however, and the Xspedius network for the most part  
22 operational through the crisis.

23 As with other carriers, Xspedius was dependent  
24 upon Bell South tandem for connectivity to some  
25 carriers and on other terminating local providers

□

1 to guarantee terminating end of its calls. In  
2 cases where Xspedius was directly connected to other  
3 carriers, however, such as long distance carriers,  
4 Xspedius customers were able to make long distance  
5 calls into and out of the region throughout the  
6 hurricane.

7 Many larger metropolitan areas such as Atlanta  
8 and Miami were seeing the rise of alternative  
9 tandem providers. Alternative tandem providers  
10 represent one of the many beneficial developments  
11 of the new competitive telecommunications landscape  
12 created by the Telecommunications Act of 1996.

13 These providers establish an alternative to the  
14 traditional Bell tandem and provide a secondary  
15 point where multiple carriers can exchange traffic.  
16 If such an alternative company tandem were  
17 established at a strategic location in New Orleans,

18 for example, it could eliminate tandem choke points  
19 and allow for better communications between local  
20 communication networks in a crisis.

21 As others have mentioned, new entrant CLECs,  
22 such as Xspedius, have also positioned switches in  
23 New Orleans and Mobile at a second story or high  
24 locations. Such positioning creates a more  
25 sustainable network.

□

1 In general, alternative providers such as  
2 Xspedius, US LEC, Newvox, Delta Comm, and Network  
3 Telephone provide critical, redundant, and  
4 alternative facilities to provide alternative  
5 communication pathways in the event of a minor or  
6 major network failure. Xspedius is ready to  
7 service -- Xspedius is already the service provider  
8 at many locations for municipalities, health care  
9 facilities, news and weather stations, and the  
10 American Red Cross.

11 During Hurricane Katrina, carriers and other  
12 private and public entities came to Xspedius for  
13 alternative phone and data capabilities. Part of  
14 the government communications strategy should  
15 include the dissemination of information about  
16 alternative communication facilities in a time of  
17 crisis, providing basic contact information and a

18 brief description of the types of facilities  
19 available with links to future information would go  
20 a long way towards opening up communications  
21 between network providers, utilities, and public  
22 entities.

23 There should be one location with a crisis  
24 contact information for all utilities, a one-stop  
25 shop for individuals seeking any kind of utility

□

1 support during the next hurricane. It would be  
2 extremely useful to have one web site with this  
3 type of utility information, but which would also  
4 offer information on the availability of power,  
5 water, road closures, weather, and other  
6 emergency-related updates.

7 If this information is splintered off into  
8 multiple agency sites and sources, it makes it  
9 significantly harder to access in an emergency.

10 Conclusions -- while there is ample room for  
11 improvement of the processes and procedures in  
12 place to respond to hurricanes such as Hurricane  
13 Katrina, Xspedius would like to take this  
14 opportunity to thank the many local, state, and  
15 federal authorities who went out of their way to  
16 assist Xspedius during Hurricane Katrina. The  
17 individuals with whom Xspedius worked responded in  
18 a diligent, professional manner and worked their

19 way through conflicting bureaucracies to meet  
20 Xspedius' requests.

21 Xspedius would like to note that we also own and  
22 operate facilities from Charleston south to Miami,  
23 in Tampa, and across the Gulf Coast to Houston.  
24 The panel and working groups are identifying  
25 important lessons learned from Katrina, and these

□

1 solutions should be implemented not only in New  
2 Orleans, but also across the broad swath of  
3 coastline that is vulnerable to similar hurricanes.

4 In sum, Xspedius recommends the availability of  
5 broader first responder status to companies and  
6 their contractors, improve access to public right  
7 of ways through such status, improved access to  
8 public security for access escorts and on site for  
9 communications facilities, consideration of  
10 alternative tandem and other available networks to  
11 provide redundant routing alternatives and  
12 streamlined information dissemination so that all  
13 such improvements are communicated in a one-stop  
14 manner to public and private entities.

15 Xspedius appreciates the work of the panel and  
16 the working groups and this opportunity to provide  
17 our input into the process.

18 Thank you.

19 MS. VICTORY: Thank you very much, and  
20 thank you to all of our speakers. That was very,  
21 very helpful. Let me open this up to questions  
22 from our panelists. Go ahead, Kay.

23 MS. SEARS: A question for Mr. Kelly  
24 -- just so all the panel members understand, can  
25 you go into a little more detail on how the paging

□

1 infrastructure is set up, specifically how the  
2 transmitters are connected to the satellite network  
3 and why towers can go down in the middle of that  
4 network and you can still deliver messages.

5 MR. KELLY: Sure. Thank you.

6 we control our transmitters through  
7 satellite, not through local landlines. So  
8 basically stated, if you have a transmitter in a  
9 given area, that transmitter is receiving its  
10 signal from the satellite, and then it is  
11 rebroadcasting that signal to the paging user.

12 Now, what can happen is and the point  
13 of weakness in the network which we are all  
14 vulnerable to is that the power goes out to that  
15 transmitter. You're off the air just like  
16 everybody else.

17 The difference with paging technology  
18 is that we're simulcasting from many transmitters,  
19 and when you have flat areas like you have on the

20 Gulf Coast, if the power goes out to this  
21 transmitter and you're simulcasting from this  
22 transmitter and this transmitter and this  
23 transmitter, there's still a pretty darn good  
24 chance you're going to get your message from that  
25 pages, where if you had a technology that was

□

1 tethered to the closest transmitter that it was  
2 communicating with and it was based on landlines  
3 staying up -- and landlines under water -- it's  
4 off the air -- that's not going to work.

5 All we're suggesting is -- look, a lot  
6 of police, fire rescue, emergency service personnel  
7 use pagers. They're our second biggest component.  
8 We have over a million in that category that use  
9 pagers, a million subscribers.

10 But we just think, for the low cost of  
11 paging and the natural redundancy, at a bare  
12 minimum, it wouldn't cost much to give everybody as  
13 a back-up form of communication a paging device.

14 You know, these pagers work off of AA  
15 batteries. You know, all you need is a plastic bag  
16 and a couple of AA batteries and you've got your  
17 redundant system. It's not expensive. It's here  
18 right now. We're about to go into another  
19 hurricane system, and, you know, I just get a

20 little bit passionate about it because it's not the  
21 latest technology. It's not the greatest thing  
22 out there when things are going well, but when  
23 there's an emergency, what's going to work is a  
24 pager.

25 Many of our transmitters, since you

□

1 asked, are on hospitals because we have 1.2 million  
2 people in the medical profession that have pagers.  
3 We tap into many of those hospitals' emergency  
4 power grid so that when power goes out in a given  
5 area, if the hospital generator is running, that  
6 transmitter is still working.

7 we did it ostensibly for the benefit  
8 of the doctors and the nurses in that hospital,  
9 but, guess what, any citizen or any police officer  
10 or fire and rescue gets the benefit of that 3500  
11 watt transmitter; and their system is liable to  
12 work.

13 If you took New York and you knocked  
14 the power off in New York, pagers are going to work  
15 in most areas in New York because of how many  
16 hospitals. We have over 1600 hospitals that have  
17 transmitters on them in the United States alone.

18 So paging is a little bit different of  
19 a technology in that we don't tether to a landline  
20 transmitter and then broadcast the signal to you.

21 we're coming from a satellite. We can get away  
22 with it because we're narrowband. We're not ever  
23 going to replace voice communication. We have 25  
24 kilohertz slices of bandwidth.

25 so we send little bursty amounts of

□

1 data, messages, text messages, 200 characters a  
2 pop. We don't do broadband voice communications  
3 and graphics and things like that. We're not  
4 trying to say that we do, but in times of  
5 emergency, if you want to get a message to  
6 somebody, you're more likely to get it through a  
7 pager than just about any other form of  
8 communication.

9 Yeah. A satellite phone will work.  
10 Absolutely. But there's a cost associated with  
11 that as well, and we just think for a AA battery  
12 and, you know, \$20 for a numeric display, \$40 for  
13 an alpha/numeric, \$100 for a two-way pager, it's  
14 not a bad back-up system.

15 MS. VICTORY: Other questions for the  
16 panelists? Go ahead, Marty.

17 MR. HADFIELD: Yes. I think this is  
18 for Mr. Deer.

19 If the normal communication links from  
20 a Comm. Center dispatch center to your paging

21 up-link system for the satellite distribution, if  
22 that fails for some reason, either locally or on  
23 some other network level, are there any  
24 alternatives that you could see that would be  
25 available for the direct connection from a local

□

1 emergency center to your local paging network to be  
2 able to bypass the satellite in the event it is  
3 unavailable.

4 MR. DEER: If you are trying -- yeah.  
5 There are several ways you can do that. One, you  
6 could use one of the satellite phones and typically  
7 type in a text message from there to go to one of  
8 our terminals to another 800 number, an SMS  
9 message, or you could send a numeric message if  
10 you're trying to get a numeric page out to somebody  
11 from that phone.

12 And then if you look at -- I mean, we  
13 do have the same problem that if the communications  
14 center is not connected, you know, it's hard to get  
15 the message in, but what we provide from a paging  
16 network perspective is, if you look at the paging  
17 carriers, there is a whole plethora of interfaces,  
18 whether it is coming directly from the Internet,  
19 through an SMTP e-mail gateway, whether it's some  
20 paging protocol specific gateways, whether it's an  
21 SMS gateway tied into the cellular network for SMS

22 traffic and so forth.

23                   So there is a whole series of  
24 interfaces that almost all of the paging carriers  
25 have because where we're provided services is to --

□

1 you know, what Vince mentioned earlier, Fortune  
2 1000 companies, and they all have a different way  
3 of wanting to connect.

4                   So, granted, there's no one single  
5 fool-proof method to get in there, but there are a  
6 whole series of them that you typically will be  
7 able to find some method to get the page in or the  
8 message in; and Vince's point a minute ago, what  
9 you're typically trying to do there is fairly short  
10 text messages to get some information out.

11                   So what might be tedious, i.e., you  
12 know, for some of our generation to do SMS messages  
13 on a phone, but if you have a satellite phone where  
14 you could send some text messages or methods to get  
15 it out. So there are multiple ways to do that.

16                   PANEL QUESTION: Would that follow,  
17 again, at a communications center where their  
18 outside phone lines are down -- is what I'm  
19 thinking of -- and if satellite phones were not  
20 available, is there any way that you could foresee  
21 -- if it's not necessarily available today, but

22 something that you could project into the future  
23 that the FCC should be considering for  
24 interoperability to be able to access systems more  
25 directly from the communications center?

□

1 MR. DEER: You know, I have no crystal  
2 ball there. I think the key to it would be within  
3 each communications center. If they have some type  
4 of communications, i.e., if it's an IP based  
5 communications to get out to the Internet to get to  
6 some type of connectivity, they should be able then  
7 to connect to the underlying paging carrier and get  
8 a message out.

9 So it's really just -- they've got to  
10 have some type of electronic communications to get  
11 out of that center.

12 PANEL QUESTION: I'm thinking, like,  
13 wireless. In other words --

14 MR. DEER: Can we --

15 PANEL QUESTION: -- their two-way  
16 system that they do text --

17 MR. DEER: Well, if the two-way system  
18 -- if they're in okay for the two-way system, they  
19 could simply take this device if the network is up  
20 in there in that center, which to Vince's point  
21 where with the simulcasting, the same holds true in  
22 the receiver network that when I'm sending a

23 message from this device, I don't have -- I only  
24 have to find one receiver out there in the network,  
25 and typically you'll find six or seven receivers.

□

1 In the case of the degraded mode, you'll  
2 find one.

3 So you can take a device like this to  
4 get the message out, or if you're at a center with  
5 a satellite phone service, use the satellite phone.  
6 Now, granted, there may be the line of sight  
7 issues, but there are multiple ways to do that.

8 PANEL QUESTION: Are you talking about  
9 if, for instance, a police dispatch center lost  
10 connectivity, how you would get into the paging  
11 network because we have a data center here actually  
12 in Jackson, Mississippi, where we have our IT  
13 department. And we lost telco connectivity, and I  
14 got one of my engineers here; but we went out and  
15 contracted with a satellite company who was able to  
16 put a small dish on the roof of that facility and  
17 basically give us T1 like coverage right into that  
18 facility. And then they're back up, and, I mean,  
19 it's great; and it wasn't -- I want to say it  
20 wasn't that overly expensive.

21 The issue is you have to think about  
22 it ahead of time, and, you know, that's -- the lead

23 time is the issue. It's how quick could you get  
24 it. If you haven't thought about it ahead of time,  
25 you know, you're going to have an issue.

□

1 MS. VICTORY: Any other questions?

2 PANEL QUESTION: The second panelist  
3 mentioned a first responder status for  
4 communications, and I think we had better be  
5 careful in that. I think what we need to identify  
6 it as is kind of like a communications critical  
7 incident response team because you can get into all  
8 kind of issues when you're talking about first  
9 responders.

10 But credentialing is a big issue, and  
11 I'm just wondering, Nancy, if the FCC would be the  
12 one to issue some of those, you know, credentials,  
13 or is that something that is better done on a state  
14 or local level.

15 We issue them regionally. Now, I know  
16 what Harlin said about Florida, but Florida does  
17 not have a state-wide ID system yet; but our region  
18 does for our nine counties and our domestic  
19 security task force because, quite frankly,  
20 sometimes you can't wait for State Government  
21 either.

22 And so I just bring that up because  
23 that's the second it has been mentioned.

24 MS. VICTORY: And I think it is an  
25 opportunity for this panel to make a recommendation

□

1 as to how we think it would work better.  
2 Presumably, there would need to be a national  
3 standard.

4 PANEL QUESTION: I want to ask Mr.  
5 Prejean a question, if I may.

6 MS. VICTORY: Sure.

7 PANEL QUESTION: Mr. Prejean, in your  
8 own testimony, you talked about sniper fire. You  
9 talked about the problems that were going on, and  
10 if we throw in the rescue missions, the fires, the  
11 hazards of gasoline and power -- of the gas lines  
12 that were discussed earlier, power lines, looting,  
13 other various emergencies, you're recommending that  
14 we take valuable law enforcement assets; and when I  
15 was in the New Orleans area, we weren't sending one  
16 or two guys on a call. We were basically sending a  
17 SWAT team.

18 How do you recommend that we take  
19 those assets that we have, what few assets that we  
20 have, pull them off and take -- I'm assuming your  
21 company into your company and then maintain a  
22 secure area?

23 My question would be, in Alabama, for

24 example, there is a gentleman from the power  
25 company sitting over here. They contract law

□

1 enforcement officers from other areas to go with  
2 their people.

3 why can the telecommunications  
4 industry not do that?

5 I don't understand why you want to  
6 take the valuable resources, and the premise that  
7 we operate under is life and property; and when I  
8 was there, there were still a lot of  
9 life-threatening issues that were going on.

10 So my question would be, why would we  
11 take the limited assets that were there until  
12 probably day four or day five and pull them off.

13 MR. PREJEAN: The biggest concern or  
14 the issues that I would like to bring up primarily  
15 from an escort perspective or security is actually  
16 when we sent people into the affected areas, the  
17 buildings we're typically in have building  
18 security. It's actually having an escort from the  
19 point where you can't enter up to the building that  
20 you're providing service to.

21 So the escort service would be from  
22 that location, the checkpoint, to our facilities  
23 which would be the most critical area because we  
24 would be traveling through areas where there could

25 be shooting, et cetera.

□

1 PANEL QUESTION: why not wait until  
2 the area is safe, or why not bring your own  
3 contract security -- would be my question.

4 MR. PREJEAN: we could look into that.  
5 We're just asking for additional support in that  
6 area if it is available.

7 PANEL QUESTION: I understand that,  
8 and I'm trying to look at it also from a practical  
9 aspect of public safety. When you have X number of  
10 people to respond to calls, to maintain the shift,  
11 to handle the life-threatening things like you  
12 talked about, the sniping incidents, why would we  
13 take -- why would you ask us to take those  
14 resources off for a simple escort.

15 Now, days down the road when  
16 additional back up and support come, that's  
17 possible. Maybe that's a national guard  
18 responsibility. Maybe -- but I think -- I would  
19 hope that the telecommunication industry also tries  
20 to plan for some mechanism. As you said, you got  
21 in by piggy backing on someone else's security.

22 MR. PREJEAN: Correct.

23 PANEL QUESTION: There is another  
24 aspect there which is to -- that I would hope that

25 y'all pursue also.

□

1 MR. PREJEAN: I guess why we're bringing it up is  
2 because we provide services to public  
3 municipalities, fire departments, the American Red  
4 Cross. We're just looking for the support in that  
5 area because if we can't get in and our  
6 communications services go down, then there's a  
7 larger impact to the people that actually are going  
8 to protect us.

9 PANEL QUESTION: Well, we also have  
10 one other problem I hope that you understand, and  
11 one of the big problems that I recall in New  
12 Orleans was once you had people in, it was  
13 difficult to get them out; and then once you had  
14 them in, you had to worry about them, but, also, to  
15 try to maintain the safety aspect of what you had  
16 in there.

17 New Orleans was different than any  
18 situation I've ever been in. I never anticipated  
19 that I'd be walking around the street with a Level  
20 IV desk and an AR on after an incident, but we  
21 were.

22 So if we see another catastrophic  
23 event like this, I just hope that the  
24 telecommunications industry learns, too, we from  
25 the law enforcement perspective are trying to deal

□

1 with the lives and property and back up fire  
2 fighters. I would hope that maybe you guys also  
3 learned, as we have learned in Alabama, that they  
4 ought to contract their own and bring them with  
5 them.

6 MR. PREJEAN: I will definitely  
7 recommend that to our VP of --

8 PANEL QUESTION: I appreciate that  
9 consideration.

10 MR. PREJEAN: Thank you.

11 MS. VICTORY: Dave Flessas?

12 MR. FLESSAS: My name is Dave Flessas  
13 from Sprint Nextel.

14 A question for you, Mr. Prejean and  
15 other members of the panel -- you talk about a  
16 one-stop resource on the web for outage  
17 information.

18 I'm curious if, in fact, a lot of  
19 information was available on the web and was just a  
20 question of coordination and a clearinghouse or if,  
21 in fact, there was information missing on the web  
22 and we need to better leverage the web for  
23 information.

24 which of those situations was it?

25 MS. MONTANO: I think that you're

□

1 correct, and having attended the meeting in  
2 January, there was sort of a theme that went  
3 around, the remarks of each of you on the panel,  
4 about, you know, not having enough information,  
5 knowing how to get hold of it.

6                   And I guess my recommendation when I  
7 said, in my lesson learned, was let's have some  
8 kind of an inventory, and whether it's a national  
9 inventory, but something where you don't have to  
10 sit there and go, is US LEC here? You know, who is  
11 here? But maybe have some kind of -- I think the  
12 lady from New Orleans this morning talked about a  
13 state level kind of thing where you have a state  
14 data base of operations. Who's there? What have  
15 they got? What are their resources? How many  
16 employees, and who do you contact; and how do you  
17 get there?

18                   I think that's what we're looking for  
19 and recommending.

20                   MS. VICTORY: Let me ask a follow up  
21 on that.

22                   Is there a concern about putting that  
23 on a web site and making it that public? It seems  
24 like some of the types of information that you  
25 would want about redundancy and asset availability

□

1 you would not want to be public, but you would want  
2 to make sure that it is circulated around to the  
3 core group of providers and public safety officials  
4 who want that information.

5 MS. MONTANO: A lot of the --

6 MS. VICTORY: Am I correct about that?

7 MS. MONTANO: Well, there is some  
8 proprietary, but a lot of the information is  
9 available in the LERG, in the Local Exchange  
10 Routing Guide.

11 So if you know how to go through that  
12 data base, the information is there. You have just  
13 sort of got to find it.

14 And so I think that most of us in this  
15 kind of environment, you would -- we would prefer  
16 that the information be there, that you know that  
17 you have diverse options and that there are other  
18 networks out there.

19 And, therefore, I think that there's  
20 probably, you know, a line that you could balance  
21 what's proprietary versus not, but if nothing else,  
22 you at least have somebody to say, I operate in  
23 Baton Rouge and I operate in New Orleans and here's  
24 the contact person.

25 I don't think we even have that piece

□

1 of information.

2                   PANEL QUESTION: I have got one more  
3 question. You may be able to answer this better  
4 for me, but in the EOC, the emergency operations  
5 center in Louisiana and Mississippi, did they not  
6 have a utility chair or a telecommunications chair?  
7 Is this information they're talking about not  
8 already available through that contact?

9                   LT. COLONEL BOOTH: Even if the  
10 information is not considered part of the open  
11 domain or public record, the Public Service  
12 Commission of Louisiana is the regulating and  
13 licensing entity, and they do have the private  
14 proprietary information on those networks; and the  
15 way we handled it in Louisiana was -- not  
16 immediately, but we set that person up as a contact  
17 point because we don't know and asking checkpoint  
18 personnel to make a decision as to who's a vital  
19 service provider and who is not is really a  
20 last-minute operation.

21                   The proper way is to coordinate in  
22 advance with the -- with the -- emergency officials  
23 at the state or local level or even the federal  
24 level and also reach your regulating agency to make  
25 sure that you have some sponsorship for them to

□

1 help you get in.

2                   We set up our Public Service  
3 Commission in our EOC to help us make those  
4 decisions. In fact, what we did is we even picked  
5 sectors where we coordinated everyone's responses  
6 and made sure that cell phone, electric power, all  
7 the other utilities were going in together, some of  
8 which we did provide escort for; but we overlaid  
9 that with where we were having our heaviest  
10 response demands to make sure that we get public  
11 services restored in those sectors first.

12                   And so what we're asking for is  
13 coordination on the government side. We're asking  
14 for service providers to provide us with a little  
15 bit of coordination as well because we can't keep  
16 up with who's providing services to which important  
17 industry or which important government agency and  
18 who owns the company from day to day.

19                   So I think a little preplanning and  
20 coordination on both parts will get us all a lot  
21 further down the road.

22                   PANEL QUESTION: Colonel, we already  
23 have these things established. That is why I'm  
24 asking.

25                   The point of contact normally handles

□

1 that, and you are told to report to a specific  
2 spot; and then you make reference. But in some of  
3 these things I'm hearing, it sounds like they just  
4 didn't make access when they wanted to.

5 So, again, it may be that the  
6 telecommunications folks also need to understand  
7 the public safety side of the house and the  
8 security side of the house. Most of these  
9 mechanisms are already built in.

10 what I'm hearing is a disconnect in  
11 communications, and it could be articles in the  
12 association magazines, those types of things.  
13 Generally, these things are already addressed in  
14 any kind of crisis management plan.

15 MS. VICTORY: Or perhaps having a  
16 recommendation to the FCC that they publicize what  
17 the States already have in place.

18 LT. COLONEL BOOTH: Yes.

19 MS. VICTORY: Go ahead, Jim.

20 MR. JACOT: Jim Jacot, Cingular  
21 wireless -- Mr. Monroe, I have some questions about  
22 the satellite service. Like a lot of the people  
23 here, we depended upon satellite service, if you  
24 will, as the technology of last resort for  
25 maintaining voice communications because we're

□

1 looking at satellite as being the thing that we --  
2 we did see some congestion on the satellite network  
3 as we were trying to be users of it.

4           You had mentioned before in your  
5 testimony that you all had increased the capacity  
6 of your satellite network during the activity, and  
7 I don't know whose satellite network we're using.

8           So I have no comments specifically on  
9 your operation, but I was curious, as to, number  
10 one -- did -- how did you -- how do you go about  
11 increasing the capacity of your satellite network  
12 during that kind of event. And, number two, did  
13 you folks see congestion on your network? I mean,  
14 was there enough usage generated as a result of  
15 this event that it did congest your network, or did  
16 you have plenty of capacities?

17           MR. MONROE: We actually experienced  
18 plenty of capacity, but it was because, from a  
19 satellite architecture perspective, we were pouring  
20 the coals to it; and we had the ability to increase  
21 the amount of capacity in a given region through  
22 beams that are directed at it from space.

23           So what we experienced most frequently  
24 were people that couldn't connect, and they kept  
25 getting a fast busy signal. Well, they were trying

□

1 to connect to landlines which no longer existed or  
2 cellular systems that no longer existed.

3 And so regardless of where you're  
4 starting out, if you're trying to terminate to a  
5 system that isn't there, you can't do it. What we  
6 found was people that were trying to use the  
7 equipment to call out of the region were having no  
8 trouble at all.

9 MR. JACOT: Thank you.

10 MR. MONROE: You're welcome.

11 MS. VICTORY: Go ahead, Gordon.

12 MR. BARBER: Gordon Barber from Bell  
13 South -- I know that we have all talked a lot about  
14 first responders. There's also a term going  
15 around, industry emergency responders. In Stat and  
16 other entities have used that term. It simply means  
17 a priority in terms of access to fuel, security,  
18 and so forth.

19 Is that really what we're talking  
20 about when we use the term "first responder"?

21 MR. MONROE: Yes. Access to our  
22 sites to access the network damages and provide  
23 escorts to our fuel providers is what we're  
24 primarily interested in.

25 PANEL QUESTION: Mr. Monroe, this

1 might not be a logical question, I have to ask.

2                   How many simultaneous phone calls can  
3 be made off of one satellite system? Is it, like,  
4 in the hundreds of thousands or --

5                   MR. MONROE: Well, it assumes a number  
6 of questions, but, first, if you presume that there  
7 is an even geographic distribution, which, of  
8 course, there is not during the case of a hurricane  
9 -- I can't give you an exact number, but across our  
10 system, it is, you know, hundreds and hundreds in  
11 that region, but not millions in an area the size  
12 of New Orleans, for instance.

13                   So I can't give you that. Across the  
14 -- you know, our system is a world-wide system. So  
15 around the world, it's operating in the millions,  
16 or it can operate simultaneously in the millions.

17                   PANEL QUESTION: But, like, in the New  
18 Orleans area itself, hundreds and hundreds?

19                   MR. MONROE: No, no, no. Well, I'm  
20 thinking about New Orleans, specifically the area  
21 of the city limits of New Orleans. I don't know  
22 how many simultaneous calls it is. I'd have to get  
23 that information for you. I'd be pleased to  
24 provide it.

25                   MS. VICTORY: Carson, did you have a

1 question?

2 MR. AGNEW: I want to react to the  
3 comment about first responders and credentialing.  
4 I think there are two issues here. One is the  
5 credentialing, and one is access control.

6 And if you flew here the other day,  
7 you probably noticed that the airlines had solved  
8 both problems because they have to credential you  
9 and they end up giving you a boarding pass.

10 And the boarding pass has a number on  
11 it most of the time, and it says it lets Group 1 in  
12 first and then 2, 3, 4, 5, 6, 7; and you can decide  
13 where in the hierarchy and how important it is  
14 according to what flight it is.

15 This is not a -- this is not a -- this  
16 is not going to be a hard problem to solve if you  
17 just put your mind to it.

18 MS. VICTORY: Thank you very much.  
19 Any other questions from the panel?  
20 Go ahead, Chief.

21 MR. PITTS: I have one comment and one  
22 question, I think.

23 To go back to something Ted was  
24 talking about and I think it came back across the  
25 table here about the information on the companies

1 and the communications network and all of that and  
2 putting it on web sites and things.

3           If you're dealing with a hurricane,  
4 that's probably not a bad thing, but if you're  
5 dealing with terrorism or WMD, it's a big issue;  
6 and it's something that the panel's going to have  
7 to look at real close because you've got to be  
8 careful with that because we're trying to cover the  
9 whole spectrum.

10           Mr. Monroe, on the satellite phones, I  
11 noticed that the majority of those that you issued  
12 out was to Homeland Security and FEMA, federal  
13 agencies, and things like that. When we had first  
14 responders in areas that were completely  
15 devastated, and when these folks say that their  
16 area was gone, they mean it was gone. Their city  
17 hall, their entire city government was nothing but  
18 a slab. It was just like this floor in this room,  
19 and the whole community looked that way for miles  
20 and blocks and just -- you know, they needed some  
21 type of -- part of that infrastructure to be able  
22 to communicate and just provide basic services to  
23 the citizens that were left in that community.

24           Do you have that capability to get it  
25 that far down the chain and move it away from FEMA

1 and DHS?

2 Not that they don't need it, but the  
3 guys on the ground need it bad. They really do.

4 MR. MONROE: Actually, I think our --  
5 we may have emphasized what happened for the  
6 governors' offices in Louisiana and Mississippi,  
7 but, you know, our primary representative in this  
8 region of the country left and got back to just  
9 splinters as well.

10 I, myself, am from New Orleans, and,  
11 though I had a lot of damage, at least I wasn't  
12 flooded out.

13 So I know exactly what you're talking  
14 about, and our -- our guy that was our sales rep --  
15 was getting phones that we would send Fed Ex to  
16 Memphis and driving them down.

17 So we were trying to get to everybody  
18 that we could get to. I'm sure we didn't get to  
19 everybody that needed it.

20 PANEL COMMENT: You are not going to  
21 get to everybody. It is just not possible.

22 MS. VICTORY: I have a question for  
23 our paging and satellite panelist, and that is,  
24 putting aside donated assets after the hurricane  
25 struck, can you give me a sense of what your

1 penetration was among the public safety community  
2 in terms of customers to the extent you had  
3 arrangements with them to provide either paging or  
4 satellite as either a primary or a back up system.  
5 I just want to try to get a sense of to what  
6 extent, you know, is your penetration within that  
7 community in terms of real world contracts. What  
8 is that today?

9 MR. KELLY: On the paging side, for  
10 instance, the State of Louisiana is a big customer  
11 of USA Mobility. We provided them thousands of  
12 pagers. We added extra devices before the storm  
13 hit and then stayed in communications with them  
14 while the storm was going on.

15 As I said, we have about a million two  
16 government type paging devices with customers on a  
17 nationwide basis. That's, you know, local, state,  
18 and federal all combined.

19 So we have many of these agencies  
20 penetrated. I think we could be a lot more  
21 penetrated, and I think, you know, paging still  
22 gets looked at as kind of a yesterday technology;  
23 but it's something that will work. It will work  
24 this year very well for people if they need it.

25 So we do have a lot of those customers

1 already. I didn't want to give you the impression  
2 that we didn't.

3 MS. VICTORY: Okay. Thank you.

4 MR. MONROE: I don't think I can  
5 answer that accurately for Globalstar except to say  
6 that satellite communications is only now coming of  
7 its own, and people have understood in the last few  
8 years that it's really not a very expensive  
9 technology and it works well; and, regrettably, as  
10 a result of any number of different events which  
11 are calamitous in nature, people have become more  
12 and more aware of this as a product.

13 And so though we ended up delivering a  
14 lot of equipment in this region as a result of  
15 Katrina, there was a lot that had been sold in the  
16 last few years as a result of people just becoming  
17 aware of its availability.

18 In the year before when there were  
19 five hurricanes, you know, that is something that  
20 people remember in the off season.

21 MS. VICTORY: I'm just trying to get a  
22 sense of to what extent the community is aware of  
23 and utilizing the technology.

24 MR. MONROE: I think they're aware of  
25 it, but for any number of different reasons, not

□

1 the least of which is just the reluctance to spend  
Page 191

2 money until you're really convinced of it, I think  
3 it's a technology that's nascent, even today.

4 MR. DEER: Nancy, if I could, from a  
5 Skytel perspective, since I am President of that  
6 division of Verizon, we have a significant number  
7 of units. I don't know the total number off hand  
8 with the Federal Government, specifically with FEMA  
9 under a GSA contract, but they maintain those units  
10 for the purpose of responding to emergencies within  
11 FEMA as well as -- if you look at what they were  
12 doing is they were using the two-way devices  
13 specifically to do a lot of coordination when they  
14 couldn't get the other stuff to work within the  
15 first few hours after the hurricane or even the  
16 next few sets of days.

17 So it was something that at least  
18 parts of the Federal Government, you know, utilized  
19 and recognized the utility of the devices. So it's  
20 not like they're not aware of it.

21 I think what we're trying to do from  
22 an industry standpoint is make sure that everybody  
23 recognizes that that is a technology that could get  
24 some additional widespread use that would really  
25 help in some of these cases.

□

1 MS. VICTORY: Great. Thank you. Kay

2 Sears.

3 MS. SEARS: I was just going to add to  
4 the comments from Globalstar. What we found on the  
5 fixed broadband side was that satellite  
6 communications had -- the groups that were  
7 knowledgeable were the federal groups, FEMA and the  
8 national guard. They had deployable v sats to do  
9 broadband voice data and video. Down at the local  
10 level and the police, fire, and that level, they  
11 were not as educated on what sat. Comm. could do.

12 So I think we're back into the issue  
13 of what was pre-deployed or prepositioned and what  
14 was asked for after. We had hundreds of requests  
15 after Katrina, but then we had a host of problems  
16 from inventory to how we get into --

17 MS. VICTORY: Training.

18 MS. SEARS: -- the -- and training --  
19 and how we get it into the affected area.

20 MS. VICTORY: Okay. Sheriff Sexton?

21 MR. SEXTON: Mr. Prejean, we talked  
22 about Katrina. Did you have any experience with  
23 Rita, and, if so, did you experience the same  
24 problems; or did you see significant difference?

25 MR. PREJEAN: Actually, for Rita, I

□

1 stayed in Lake Charles. As I mentioned, I'm the  
2 regional operations manager for Louisiana for

3 Xspedius, and I actually lived through Rita in  
4 downtown Lake Charles, and there were -- the  
5 differences that I experienced were mainly because  
6 I was in Lake Charles. We didn't have any problems  
7 gaining access to our site in just 30 days prior or  
8 less.

9 I knew that there was a fuel problem  
10 in New Orleans getting fuel providers in there. So  
11 we staged several 55-gallon drums of fuel.

12 So we did use our previous contacts  
13 from the Louisiana State Police and FEMA and with  
14 our permits to get our fuel providers in. That was  
15 probably the biggest help out of everything, having  
16 those permits in place and just being able to pick  
17 up the phone, call a fuel provider that was in  
18 business, and meet them, you know, to come in.

19 MR. SEXTON: I asked you that for a  
20 specific reason. One, the police chief and the  
21 sheriff there handled things a little bit  
22 differently than were handled in New Orleans, but  
23 we were also there from Alabama; but I thought I  
24 noticed many of the problems from Katrina were  
25 dealt with because people had the contacts and had

□

1 the knowledge of how to go ahead, preplan, and deal  
2 with the problems. And I think you have answered

3 that question. Thank you.

4 MR. PREJEAN: You're welcome.

5 PANEL QUESTION: I'm going to refer  
6 once again to the National Response Plan and some  
7 of the things that you have brought up are quite  
8 surprising. We have already addressed in the plan.

9 It begs the question, why weren't  
10 these things implemented. With regard to the  
11 Department of Homeland Security, the responsibility  
12 pre-incident is to work closely with the industry,  
13 state, local, and tribal emergency managers and  
14 other private sector coordinators to ensure that  
15 the latest technology is available to agencies  
16 participating in the response effort.

17 In addition to that, there are a  
18 number of federal agencies that are supposed to  
19 identify telecommunications assets not within the  
20 affected area that may be brought physically or  
21 employed electronically to support the affected  
22 area, and one that is very surprising with regard  
23 to access to the disaster area that the  
24 responsibility of the Department of Homeland  
25 Security and other agencies is to coordinate ESF12,

□

1 which is energy, regarding communications industry  
2 requests, your requests, for emergency fuel  
3 resupply and safe access for telecommunications

4 work crews to the incident area.

5                   So everything that you have talked  
6 about is apparently already in the National  
7 Response Plan, and it just begs the question, why  
8 weren't these things carried out.

9                   MS. VICTORY: Any other comments or  
10 questions from the panel?

11                   All right. I want to thank this group  
12 of speakers very much. It is just about a quarter  
13 after 3:00. We are going to take a break until  
14 3:30 when we have our next group of speakers.

15                   But thank you very much. This is very  
16 educational for us. Thanks again for  
17 participating.

18

19                   (A BREAK WAS TAKEN UNTIL 3:30 p.m.)

20

21

22

23

24

25

□

1

2

PANEL 3

3

4 Call to Order and Opening Remarks

5 Nancy Victory, Chair of the Independent Panel

6

7 We are on to our third group of speakers today.

8 Let me go ahead and introduce them before they

9 start their presentations.

10 First, we have Benjamin Mobias, the Territory Sales Manager  
11 from Tropos Networks; Guy Clinch, Director of Programs and Solutions  
12 for Avaya, Inc; Jeff Allen, the Core Coordinator, Community  
13 Wireless Emergency Response Initiative; John  
14 Pearce, Executive Director, Homeland Security for  
15 Harris Corporation; Dr. John Vaughan, Vice  
16 President, Wireless Systems Business Unit, for  
17 M/A-Com, and, finally, Nick Tusa of Tusa  
18 Consulting.

19 Thank you all for being here this afternoon. We  
20 very much look forward to your presentations, and  
21 let me go ahead and start with Mr. Mobias.

22

23

24

25

□

1

2 Benjamin Mobias, Territory Sales Manager

3

Tropos Networks

4

5 Hi. Good afternoon. My name is Ben Mobias, and  
6 I'm with Tropos; and thank you, ladies and  
7 gentlemen of the committee and specifically to Ms.  
8 Victory and Ms. Fowlkes for setting up the hearings  
9 and all their hard work today and the time going  
10 into today.

11 Tropos Networks makes hardware and software for  
12 mesh networking. This technology is being used by  
13 our customers to build outdoor, redundant, high  
14 speed WiFi wireless networks. These networks  
15 provide data, voice, and video communications to  
16 laptops, PDA's, WiFi phones all of which are on the  
17 ground.

18 Before Katrina, Tropos products were installed  
19 in hundreds of locations around the world. One of  
20 our most important installations was in New  
21 Orleans. There, we helped to build a wireless  
22 video surveillance network for the New Orleans  
23 Police Department.

24 That network was in use before the hurricane and  
25 has continued to be in use today. That was built

□

1 specifically in high crime areas to help  
2 dramatically reduce crime, which it did, and we got  
3 a lot of publicity about that before the hurricane.

4 When Katrina struck the power to those poles

5 where these are installed -- they're normally  
6 installed on light poles -- was lost. However, the  
7 radios have internal batteries, and they continued  
8 to operate for about eight hours after power was  
9 out providing data and voice and video access to  
10 anyone in the police force who knew it existed.

11 while the network was built for video, the  
12 police could have and did use it for other  
13 services, as well. When the power was restored,  
14 our radios came back on, all of them minus one  
15 where the pole fell and crushed the radio; but all  
16 the remaining ones are back up with no intervention  
17 manually and are fully operational today.

18 Outside of New Orleans, Skytel Verizon used  
19 Tropos to build out temporary communications  
20 systems in around 25 locations throughout the Gulf  
21 region that were impacted by Katrina. These mainly  
22 were for use by FEMA and other organizations to  
23 provide Internet access so that reports could be  
24 filed, e-mails could be sent, and other types of  
25 data communications could be used.

□

1 Skytel provided a satellite system to provide us  
2 the connection out of those areas, and then the  
3 local connectivity was spread using Tropos  
4 hardware.

5 They were critical to those users, both

6 government and relief agencies, in those first days  
7 and weeks following. In fact, three of those  
8 networks are still operational today that are  
9 temporary in nature.

10 Back in New Orleans, Tropos responded to the  
11 request for communications system for the downtown  
12 area, and working again with Skytel and Intel,  
13 Dell, and several government agencies, we built a  
14 network covering the business, warehouse, and  
15 French Quarter districts.

16 The network, which is still operational, was  
17 used by the City, FEMA, Red Cross, and local  
18 citizens -- the same network. These uses varied  
19 dramatically, however. Local citizens might use it  
20 for Internet access to communicate with their  
21 family and residents that have been disbursed  
22 whereas the City might be using it, for example, to  
23 building inspectors.

24 Every building in New Orleans that was vacated  
25 had to have a building inspection done on that

□

1 building prior to being rehabilitated, and a building  
2 inspector could come and perform that inspection,  
3 immediately file the report from that building, and  
4 allow immediate occupation versus having to come  
5 back into a field office, file a paper report, have

6 it filed, and then a couple of days later have  
7 rehabilitation.

8 So it speeds up that process, and that's just  
9 one of many, many examples that were used. So  
10 Tropos network, the reason it was used is it's  
11 very, very easy to build. Tropos builds mesh  
12 networking. It's kind of like a web, like the  
13 worldwide web, if you think of it that way.

14 The beauty of these types of networks, mesh in  
15 general, is that if one node that's communicating  
16 to a user goes down, there's no central point of  
17 failure anywhere in the network like this.

18 So you can have these radios built on light  
19 poles -- and that's our typical installation point  
20 -- being powered from the pole itself. When and if  
21 that pole goes down, there are other poles around  
22 it that take over its coverage and continue the  
23 operation.

24 If you have 50 radios on 50 poles and all 50 of  
25 those poles go down, the network is going to be

□

1 done, but if 25 of those poles go down, the other  
2 25 will remain in operation.

3 So it's highly redundant networking providing  
4 voice, video, and data services over an IP, an  
5 Internet protocol network. We use WiFi which is a  
6 very widely used protocol for wireless

7 communications to laptops, to PDA's, and to WiFi  
8 phones, and because of that very widely deployed --  
9 it's nothing special. You can go and buy this at  
10 Best Buy, the clients for your laptop. It's a  
11 very, very easy technology for people to use, and  
12 it's in almost every single laptop that's sold  
13 today. It has WiFi integrated in it.

14 So an infrastructure that allows these WiFi  
15 devices to talk is very, very valuable. Because  
16 we're mesh, we're very easy and quick to install.  
17 That was one of the reasons why Skytel and other  
18 agencies or other companies used us to build out  
19 for support immediately following the hurricane.

20 So to summarize and wrap this up, as a  
21 recommendation, we would like the panel to consider  
22 mesh networking as a technology that is very, very  
23 beneficial post disaster recovery and should be  
24 included in any kind of report that you come up  
25 with. It is used for a higher standard of

□

1 resilience, redundancy, and diversity than is  
2 capable in previous technologies for Internet  
3 technology. We hope that this was beneficial to  
4 you. Thank you very much for your time.

5

6 Nancy J. Victory, Chair of the Independent Panel

7 Thank you very much.

8

9 Guy W. Clinch, Director of Programs  
10 And Solutions, Avaya, Inc.

11

12 Thank you, Chairperson Victory and distinguished  
13 panel. I appreciate the opportunity to speak with  
14 you today.

15 Again, my name is Guy Clinch, and I have over 25  
16 years experience in the telecommunications  
17 industry; and I've counted among my customers as  
18 major metropolitan police, fire, health care,  
19 education, and other organizations responsible for  
20 the safety and welfare of the public.

21 My message is that communications arranged  
22 correctly enables Government to fulfill its  
23 responsibility to protect the citizens in  
24 disasters. My company, Avaya, Inc., is one that  
25 arranges communications. We have a long and unique

□

1 vantage point on disaster communications.

2 Avaya is a significant communications provider  
3 at all levels of Government. We serve more than 90  
4 percent of the Fortune 500 and many of the largest  
5 states in the nation and agencies across Washington  
6 from the Department of Homeland Security to the  
7 White House.

8 As a distinction from telecommunications  
9 carrier, Avaya provides advanced phone systems  
10 including wireless, voice messaging, and call  
11 centers. These are tools of communications that  
12 people can touch, and our business is to apply  
13 these tools to the organization's needs.

14 Avaya has a long history in mission critical  
15 communications that protects citizens and will  
16 enable Government to manage disasters and minimize  
17 their human toll.

18 I will talk about three phases of disaster  
19 preparedness, which is before, during, and after,  
20 and I will speak about three specific capabilities.  
21 These are communications applications that might  
22 have been used after Hurricane Ivan, Katrina, and  
23 Rita to decrease the impact on the public.

24 In the written comments I have submitted to you  
25 for entry into the record, these communications

□

1 applications are expanded upon and other examples  
2 are included.

3 So first a word about the technologies to be  
4 applied -- there are many, and no single one is  
5 enough. What is needed is a tool kit of  
6 technologies that can apply as circumstances  
7 dictate. Some of the tools become part of the

8 permanent infrastructure, and others, such as  
9 quickly deployable mobile communications systems,  
10 are available upon demand.

11 what is needed is integration of best-in-class  
12 applications based on non-proprietary industry  
13 standards, and what is needed in short is more  
14 planning and better arrangements of the resources  
15 that are already available.

16 The three technologies I will mention are  
17 examples of how the combination of our computers  
18 and the power of telecommunications network is  
19 facilitating new approaches to disaster  
20 preparedness response and recovery. The dramatic  
21 expansion in personal mobile communications  
22 energizes all of these possibilities.

23 with nearly 200 million current domestic mobile  
24 telephone users, government entities in the United  
25 States are in a potential position to communicate

□

1 with citizens in advance of events in unprecedented  
2 and personalized ways. This subject is discussed  
3 more in my written comments.

4 In the first phase of emergency response, before  
5 events unfold, the communications challenge is as  
6 much of a message challenge as it is a technology  
7 problem. Accurate and actionable information in  
8 advance of events can take many out of harm's way.

9       Look back a year before Katrina to Hurricane  
10 Ivan in New Orleans. After Ivan, New Orleans  
11 resident Latonya Hill commented, "They say  
12 evacuate. They don't say how to."

13             Little changed. Even after Katrina,  
14 Hurricane Rita showed again an inability of  
15 Government to communicate critical and specific  
16 information. As Rita churned towards 5 million  
17 people in Southeast Texas, and with no clear  
18 direction from their Government, we experienced a  
19 traffic jam 100 miles long.

20       Had Rita struck with full force, many would have  
21 been exposed on the highway, and asking for the  
22 military to help in rushing fuel to stranded  
23 drivers, Mayor Bill White commented, "Being on the  
24 highway is a death trap."

25       Getting information right is the first step. So

□

1 we must arrange communications to deliver it.  
2 Consider how a technology in use across the country  
3 may have changed some of these scenarios.

4       Last year in my hometown, a chemical spill  
5 caused dangerous pH levels in our town's drinking  
6 water. Advantageously, my town has an emergency  
7 mass notification system, a system that uses a  
8 computer to simultaneously dial thousands of

9 telephone calls.

10 Within minutes of the event, everyone in our  
11 town got a telephone call telling us what was going  
12 on and giving us specific instructions on how to  
13 react. In the days following the event, we got  
14 periodic update phone calls keeping us informed.

15 Now, that technology can work on a larger scale  
16 as well. Before Texans left their homes, what if  
17 they had received a phone call from their  
18 Government giving them specific examples about when  
19 they should evacuate and how? What if regular  
20 periodic phone calls to their cell phones talked to  
21 them about congestion and alternative routes? What  
22 if the system allowed motorists to press a key to  
23 reach out for help such as directions as to where  
24 to buy fuel or to find shelter?

25 This is all existing, low-cost, yet often

□

1 under-used technology. Now, let's consider as the  
2 disaster unfolds.

3 Command and control of responding organizations  
4 and the speed and flexibility of their actions  
5 depends upon robust communications. Yet  
6 significant Ops. Fields exists between agencies and  
7 jurisdictions.

8 According to the Department of Homeland  
9 Security, the challenge of communications

10 interoperability has plagued agencies for decades.  
11 It's almost five years now since September 11,  
12 2001, and responding organizations from one county  
13 or agency in all likelihood cannot communicate with  
14 other first responder organizations in the same  
15 locale.

16 One debate is about radio spectrum. According  
17 to the DHS, the Federal Government has set aside  
18 billions to upgrade and replace existing public  
19 safety communications equipment. Frankly, this  
20 debate is about rearranging deck chairs. Even if  
21 the political choices were made to allocate  
22 spectrum to public safety, how long would it take  
23 and how much would it cost for the 87,849 local  
24 government units alone just to convert to the new  
25 standard.

□

1 Consider a comparable example. Enhanced 911  
2 standards were required by the wireless  
3 Communications and Public Safety Act of 1999. It  
4 is a federal law backed by a series of orders of  
5 which you may well be familiar. Yet E911 has yet  
6 to be a universal reality. Transition period  
7 deadlines have expired. Investments have been  
8 made, but incompatibility still threatens the lives  
9 of those in danger as they did nearly a decade ago,

10 especially first responders.

11 The answer to the interoperability challenge is  
12 not to rip and replace existing public safety  
13 communications. The cost, the complexity, and the  
14 risks are too high. The answer lies in solutions  
15 that bridge the gap between disparate radio systems  
16 of multiple agencies. Solutions exist. They are  
17 being implemented in both the public and private  
18 sector, and the process uses tools that take  
19 advantage of tools familiar to the first responder  
20 community.

21 They even add functionality, allowing a  
22 traditional telephone, a cell phone, or even a  
23 voice-over IP device to dial through to the public  
24 safety communications systems. In addition to  
25 interoperability, the systems add features such as

□

1 conference calling, call pick up, and live  
2 transfer.

3 After an event like Katrina, the goal was to  
4 restore civilian well being. You need to know  
5 who's affected, what are their needs, and how to  
6 direct the right individual help. Avaya and  
7 companies we work with responded after Katrina to  
8 an American Red Cross request by urgently deploying  
9 call center technology to the Houston Astrodome and  
10 Red Cross shelters throughout the country.

11 This is how displaced citizens found missing  
12 family members, told one another they were still  
13 alive. This system also helped the American Red  
14 Cross to process tens of thousands of applications  
15 for assistance. The call centers were the  
16 beginning of civil aid.

17 Even a severe event is over soon. Renewed  
18 civility begins with hot food and dry clothing,  
19 yes, but also by handing along valid information  
20 from public entities to relief organizations,  
21 matching people in need with the needed resources,  
22 and providing efficient, responsibility  
23 distribution of the resources.

24 This, too, is difficult after a disaster, but it  
25 doesn't have to wait for agents to personally

□

1 answer telephones nor that a victim go on line.  
2 self-service voice technologies can collect  
3 information in organized ways from callers even  
4 when a live agent isn't there to answer.

5 Communications for human follow up after Katrina  
6 were planned in reaction, and the lesson is that  
7 relatively modest advance planning could achieve  
8 much sooner results. Consider the radio towers,  
9 telephone poles, and other infrastructure often  
10 fail in disaster. Mobile communications resources

11 need to be available for quick deployment. They  
12 may also be prepositioned to make their deployment  
13 even faster.

14 They can be made self sustainable with  
15 generators and linkable to satellites, and when  
16 they're based on industry-standard protocols, they  
17 can participate flexibly with other technologies.  
18 In the urgency of a Katrina, disparate agencies and  
19 competitors set aside jurisdictional differences,  
20 and under the auspices of the American Red Cross,  
21 delivered mutual planning and cooperation.

22 In planning scenarios that would anticipate  
23 disasters, that same spirit can continue to  
24 prevail. Avaya continues to be engaged in planning  
25 of this kind. Avaya's view is that a range of

□

1 private communications facilities, such as call  
2 centers, can be, by agreement, pulled and arranged  
3 for shared emergency use within hours rather than  
4 days.

5 In summary, mainly planning and modest  
6 investment and straightforward arrangements of  
7 existing capability are needed to implement the  
8 directions I've outlined. Vision should not crowd  
9 out realism. Imagined ideals should not trump what  
10 is possible. Emerging technology has an enormous  
11 role, which I have intentionally under-emphasized

12 in this commentary.

13 Avaya seeks the chance to conduct further  
14 discussions when the opportunity permits.  
15 Advancing technology can expand the powerful  
16 existing capabilities that I've emphasized, and no  
17 investment revolution is required. That would be  
18 my next topic if there was time.

19 Thank you. My comments have been in summary.  
20 The copy I submitted to you has more detail. I  
21 have tried to deliver a message of hope, not just  
22 hope for the best by and by. Thank you.

23

24 Nancy J. Victory, Chair of the Independent Panel

25 Thank you very much.

□

1

2 Jeff Allen, Core Coordinator Community Wireless  
3 Emergency Response Initiative

4

5 Thank you. My name is Jeff Allen. When the  
6 hurricane struck, I was in Guatemala pursuing a new  
7 career in international disaster relief. I came  
8 home to the United States because I could see that  
9 is where the most work was needed.

10 Though I'm a trained Red Cross disaster relief  
11 worker, I chose to work with Radio Response, an ad

12 hoc organization being created by the community  
13 wireless community because I knew that my community  
14 wireless expertise and my IT industry expertise  
15 would be more useful there.

16 The coalition I represent today includes the  
17 Community Wireless Emergency Response Initiative,  
18 Radio Response, Aid Phone, and many other  
19 organizations that I don't even know the name of  
20 that were working in many other parts of the  
21 country.

22 I volunteered for Radio Response for six weeks  
23 in Hancock County, and for the first two weeks, I  
24 worked along side the original team there. As  
25 existing leadership needed to return home to their

□

1 families and jobs, I became the on-site project  
2 manager.

3 Radio Response used donated bandwidth,  
4 equipment, and volunteer labor to build and operate  
5 a network spanning 40 miles and 20 different  
6 customer sites at least. Our customers included  
7 government services, non-profit relief efforts, and  
8 public Internet labs that served the citizens and  
9 anyone else who stumbled in.

10 while the citizens were using the Internet  
11 access to rebuild their lives and just keep in  
12 touch, send I'm hanging in there e-mails, what we

13 really found our real impact was with making relief  
14 workers more effective. We estimate that over the  
15 course of the -- we estimate that thousands of  
16 people have used our network, and the Radio  
17 Response network is still up and running today; and  
18 people are still using it.

19 So we proved that deploying community wireless  
20 network in this context works and that it's a  
21 valuable service. It's a service that the citizens  
22 need and that makes other people more effective.  
23 Part 15 made our work possible. The Part 15 rules  
24 for unlicensed spectrum made our work possible, but  
25 it also gave us some problems.

□

1 I want to tell you what worked, and I want to  
2 tell you what we need to do to make it work better  
3 next time. So the community wireless movement has  
4 celebrated many successes around the world and  
5 around the nation during the last few years, but  
6 this is the biggest network that has been built in  
7 a disaster area yet.

8 We handled -- out of this new experience, we  
9 learned a lot, but the most important thing that we  
10 learned is that the technology works, that you are  
11 able to deploy it when you've got -- are faced with  
12 many different difficulties and that you provide a

13 service that's very well appreciated.

14 The network that we built carried web pages,  
15 e-mail, telephone calls, and even video out of the  
16 disaster area. The users of our network included  
17 response personnel, citizens who were displaced by  
18 the disaster, and volunteer workers.

19 what we found was that the network and the very  
20 presence of us as IT workers in the disaster area  
21 acted as a force multiplier. It made people more  
22 effective at their own specialties because it made  
23 it possible for them to use the tools they were  
24 used to to do the job that they were there to do.

25 Our equipment operated -- we made it possible

□

1 for people to use their own equipment over the  
2 Internet protocol in some cases connecting back to  
3 their home offices over public network.

4 I'd like to point out at this point many people  
5 today have been talking about IP, the Internet  
6 protocol, but it might as well be called the  
7 interoperability protocol. People have talked  
8 about how you can't get your radios to talk to one  
9 another, but people that showed up in our  
10 neighborhood, for instance, Florida law enforcement  
11 personnel, were able to open their laptop and log  
12 in and use their e-mail account at home.

13 Another example of this force multiplier effect

14 was that the churches running feeding centers in  
15 Hancock County. They used the Radio Response  
16 network to coordinate food deliveries and  
17 replacement volunteers.

18 And a final example where we were able to help  
19 out is at Carolina's Med One field hospital  
20 referred to earlier today as K Mart General. They  
21 used our network to coordinate staff rotation and  
22 demobilization plans. They brought satellite  
23 infrastructure with them actually provided by my  
24 friend, John, here from Harris Corporation.

25 And so they were able to switch between the

□

1 networks as it suited them. As they had problems  
2 with satellite, then they could switch to our  
3 network, and our network had problems, too.

4 So we worked together.

5 Part 15 gave us tools to build and implement in  
6 the face of difficult and changing conditions.  
7 Because we had access to unlicensed spectrum, we  
8 were able, just like companies were restoring  
9 service faster just like we were building a  
10 community network faster.

11 we also learned that preparation pays off. We  
12 achieved our goals, but it took us too many people;  
13 and it took us too long to do it. Private donors

14 and corporations have stepped forward and want to  
15 support us so that we can do the same work again in  
16 the future.

17 I hope to see teams like our team organized all  
18 around the country following the model of the  
19 area's amateur radio emergency services or perhaps  
20 the federally chartered DMAT team. That stands for  
21 disaster medical assistance team.

22 We also learned that we need software to make us  
23 more effective. Luckily, the kind of software we  
24 need can be developed by volunteers using the open  
25 source model. The Community Wireless Emergency

□

1 Response Initiative is committed to supporting that  
2 sort of development work.

3 Part 15 made our work possible, but it also made  
4 it harder. One of the reasons it made it possible  
5 was that it gave us very easy access to cheap  
6 equipment because of the billions of dollars of  
7 investment made by companies some of whom are on  
8 this panel over the last decade, driving down the  
9 cost of this consumer equipment.

10 Second, we didn't need a license to do our work,  
11 and that meant that we were able to deliver more  
12 results more quickly and not dedicating anyone to  
13 paperwork. To the FCC's credit, they were doing  
14 incredibly fast turnaround with emergency licenses,

15 but we were relieved not to have to burden them so  
16 that they could focus on coordinating licenses that  
17 needed coordinating, technologies that need careful  
18 coordination like FM broadcasting and others.

19 Third, several bands, we were given access to  
20 several bands and many different technologies so we  
21 could use those to find an engineering solution  
22 even when things didn't work the first time.

23 Part 15 made our life a little bit more  
24 difficult, too. The first thing that we discovered  
25 was that spectrum became very congested -- not the

□

1 first day, not the second, but several days later.  
2 This is actually further evidence of the success of  
3 Part 15 because it shows that commercial entities  
4 and government entities were all hopping on and  
5 using Part 15 devices to restore their service.

6 So we wasted a little bit of time having to  
7 scramble and fit into the increased demand for the  
8 spectrum, and we were unable to use some of our  
9 equipment. The limited bands we had access to are  
10 also not perfect for disaster recovery. The 900  
11 MHz band we were using had trouble penetrating  
12 foliage. As a result, you need tall antennas to  
13 get over the pine trees.

14 So our limited resources meant that the only

15 installations we could do were rooftop  
16 installations, and we found that we had to use  
17 antennas; and that made the installation much more  
18 difficult than simple panel antenna.

19 More bands with different promulgation  
20 characteristics would give us the ability to make  
21 more links and more conditions and would help to  
22 relieve the spectrum condition.

23 The last problem that we had was the lack of  
24 education. Part 15 rules for unlicensed spectrum  
25 access are not well understood by emergency

□

1 managers. A frequency coordinator in Hancock  
2 County threatened to shut us down because he was  
3 concerned that we were going to interfere with WQRZ  
4 LP.

5 The thing he was worried about was simply  
6 theoretical or adjacent channels, but there was  
7 never a problem. The problem was that he didn't  
8 understand what the technology was and why we  
9 didn't have a license to show him.

10 Second, access to water towers was difficult  
11 because there was no pre-existing understanding in  
12 the minds of the disaster response professionals in  
13 the cities about the benefits of networks like  
14 ours.

15 Another example we had was a government-funded  
Page 219

16 project in the city that was trying to assert  
17 priority over us for access to channels because  
18 they said that they were serving public safety  
19 users.

20 So we spent some time on negotiation, and we  
21 were able to run our networks in parallel. That's  
22 the beauty of unlicensed spectrum, and that's the  
23 way it's supposed to operate.

24 The answer to this lack of education is simply  
25 more education and more outreach. The Community

□

1 wireless Emergency Response Initiative is committed  
2 to building bridges to the emergency managers, but  
3 we also need help from the FCC and FEMA to add to  
4 the existing training that they do and existing  
5 outreach they do to teach people about the benefits  
6 of unlicensed spectrum usage and about the  
7 procedures for coordinating contributions from  
8 volunteers as well as corporate restoration  
9 efforts.

10 So I would like to leave you with three points.  
11 First, we proved that community wireless works in a  
12 disaster area and that it meets a need. Second, we  
13 showed that easy to IP experts and having a nimble  
14 wireless ISP in the zone acted as a force  
15 multiplier making people more effective. Finally,

16 we believe that with expanded access to unlicensed  
17 spectrum that we'll be able to make even more  
18 progress making people more effective.

19 By investing in preparedness, together we can be  
20 ready to provide more services more effectively in  
21 the future. I've arranged to make sure that you  
22 guys have a copy of my report I wrote about the  
23 lessons we learned. I'll be using that report to  
24 teach other organizations how to follow the model  
25 that we followed.

□

1 Thank you very much for giving the community  
2 wireless movement a voice in these proceedings. We  
3 appreciate your help.

4

5 Nancy J. Victory, Chair of the Independent Panel  
6 Thank you. We will turn to Mr. Pearce.

7

8 John Pearce, Executive Director  
9 Homeland Security, Harris Corporation

10

11 Good afternoon. My name is John Pearce, and I  
12 am the Director of Homeland Security for Business  
13 Development Advance Programs within Harris  
14 Corporation. On behalf of Harris Corporation and  
15 our CEO, Howard Lance, I would like to take this  
16 opportunity to thank the chairman, the chairperson,

17 Ms. Victory, and also Commissioner Tate for their  
18 support and work on this panel.

19 Someone once said that tragedy is a result of  
20 indifference and inaction. Clearly, this  
21 Commission refuses to remain indifferent or  
22 inactive. It has demonstrated its commitment to  
23 identifying the problems that hampered the creation  
24 of viable and efficient communications network  
25 before and directly after Katrina hit Louisiana and

□

1 Mississippi.

2 We thank you for your commitment in seeking  
3 broad public and private sector input to resolve  
4 those challenges that fall within your  
5 jurisdiction. We are honored to have this  
6 opportunity to share our recommendations with you.

7 Briefly, I would like to take a moment to  
8 introduce Harris Corporation to you. Harris is an  
9 international corporation of communications and  
10 information technology serving Government,  
11 commercial markets, and more than 150 countries  
12 worldwide. We employ over 13,000 employees along  
13 with 5500 engineers and scientists.

14 As a supplier to the US Government, the  
15 broadcast industry, the public safety industry, and  
16 the telecommunications and cellular industries,

17 Harris is in a unique position to understand the  
18 impact of Hurricane Katrina on communications  
19 network.

20 We are actively engaged in the work being done  
21 by the Commission's Media Security and Reliability  
22 Council as well as the Network Reliability and  
23 Interoperability Council. With headquarters in  
24 Melbourne, Florida, the company has direct  
25 experience with natural disasters. When Hurricanes

□

1 Charlie, Frances, Jean, and Tropical Storm Ivan on  
2 its return back from North Carolina came through  
3 Brevard County in 2004, Harris established a strong  
4 relationship with the Florida Emergency Management  
5 Agency providing critical communications support in  
6 recovery efforts.

7 In the aftermath of Hurricane Katrina, we  
8 coordinated with the Florida Emergency Management  
9 Agency to deploy critical communications  
10 infrastructure as directed and as needed. We  
11 worked primarily in the Mississippi region serving  
12 Hancock, Harrison, and Jackson Counties. Within  
13 hours of Katrina hitting the Gulf Coast, Harris  
14 Corporation personnel contacted the State of  
15 Florida EOC in an effort to provide communications  
16 equipment support to the impacted region.

17 To our surprise, we found that the Florida EOC

18 was, in fact, coordinating the majority of the  
19 relief efforts for communications in cooperation  
20 with Governor Barbour's office in Mississippi. Per  
21 the Florida EOC request, Harris Corporation had  
22 initial disaster recovery teams organized and  
23 equipped and in place in 24 hours of the storm  
24 clearance.

25 Upon arrival in Mississippi, we observed total

□

1 devastation. The senior State of Florida  
2 communications officer on site in Mississippi noted  
3 accurately that the pilgrims had more  
4 communications when they landed at Plymouth Rock  
5 than we had here today.

6 We spent the next four months re-establishing  
7 voice, data, and broadcast communications for a  
8 population that was unable to communicate with  
9 their neighbors, their local emergency personnel,  
10 much less the outside world.

11 We share the panel's sense of urgency on future  
12 preparedness. The 2006 hurricane season will be  
13 upon us in a matter of months. Yet certain  
14 recommendations will require several years to be  
15 considered and implemented. Recognizing the need  
16 to improve our nation's disaster preparedness in  
17 the most expeditious manner possible, we have

18 separated our recommendations into short-term and  
19 long-term recommendations.

20 On the short-term arena, Harris recommends that  
21 the Government acquire deployable, transportable  
22 communications suites. During the post Katrina  
23 period, survivable public communications in private  
24 facilities were repurposed for disaster recovery  
25 use, but these facilities were not equipped with

□

1 the necessary communications infrastructure to  
2 support the mission.

3 We recommend using transportable communications  
4 suites to facilitate rapid implementation of the  
5 communications infrastructure between the repurpose  
6 facility and the existing emergency operations  
7 centers.

8 Secondly, Harris recommends that the private and  
9 public sector work collaboratively to establish a  
10 strategic inventory of critical communications  
11 equipment that could be rapidly configured and  
12 deployed to disaster areas.

13 For example, a suite of rapidly deployable line  
14 of sight, beyond line of sight, and broadcast  
15 systems be put into a strategic inventory. These  
16 systems will be designed for rapid configuration to  
17 meet specific requirements.

18 When needed, these systems will be configured

19 for the mission and deployed by the most efficient  
20 means, either by air or by road, to support the  
21 exchange and broadcast of critical disaster  
22 recovery information.

23 Third, provide planning and training for  
24 situations in which no on-site communications  
25 survive the disaster. We observed that many

□

1 organizations' plans presupposed the existence of a  
2 working communications infrastructure. Without  
3 this infrastructure, the plans were not executable.

4 We recommend deployment of local community  
5 emergency response plans that include provisions  
6 for the rapid establishment of interoperable  
7 communications between federal, state, and local  
8 agencies. In addition, training and practice  
9 exercises should be in accordance with these plans,  
10 including creating communications links where none  
11 exist.

12 Fourth, require seamless collaboration with  
13 service providers, network operators, and equipment  
14 suppliers, support and implement recommendations of  
15 the Media Security and Reliability Council and the  
16 Network Reliability and Interoperability Council to  
17 facilitate development of best practice  
18 recommendations for the emergency communications

19 networks across the media and telecommunications  
20 industry.

21 On a long-term front, make interoperability a  
22 priority. Harris recommends that the Government  
23 implement interoperability communications networks  
24 using frequencies and protocols available to first  
25 responders at federal, state, and local levels.

□

1 Secondly, Harris recommends that the FCC  
2 implement an enhanced digital emergency alert  
3 system to ensure that large portions of the  
4 American public are able to receive national and/or  
5 regional public alerts and warnings.

6 Hurricane Katrina made it clear that a  
7 redundant, viable emergency communications system  
8 to address the public is critical in times of  
9 disaster. The Commission, in concert with other  
10 interested government agencies including FEMA,  
11 should charter a federal advisory committee whose  
12 goal would be to create a redundant, comprehensive,  
13 state-of-the-art emergency alert system. In this  
14 regard, Harris commends the Commission's leadership  
15 in soliciting comments on emergency alert systems  
16 and supports the Commission's efforts to create a  
17 viable EAS.

18 Thirdly, establish a regional planning  
19 commission to ensure seamless coordination between

20 federal, state, and local agencies. Ensure the  
21 provisions of interoperable communications to  
22 enable coordination between agencies.

23 Lastly, develop blueprints for hardened,  
24 survivable interoperable communications networks.  
25 These blueprints should be tailored for specific

□

1 challenges and threats of a given area, including  
2 such factors flooding, high winds, and earthquakes.  
3 For example, much of the nation's communications  
4 infrastructure was created in right of ways along  
5 our coastal US highways making the infrastructure  
6 highly vulnerable to natural disasters.

7 Plans should be developed and implemented to  
8 harden this infrastructure and/or relocate it in  
9 less vulnerable areas.

10 Harris appreciates the opportunity to submit  
11 these comments to support the panel's work in  
12 reviewing the impact of Hurricane Katrina on  
13 communications networks, and Harris is proud of the  
14 contributions we were able to make in the recovery  
15 of communities devastated by Katrina.

16 Experience provided us with insight and  
17 ground-level understanding of what is needed in  
18 short and long-term recovery of the infrastructure.

19 We look forward to working with the panel as it

20 crafts recommendations to the Commission regarding  
21 ways to improve not only disaster preparedness,  
22 network reliability, and communications among first  
23 responders, but also to address to ensure impacted  
24 communities have access to critical information.  
25 Thank you for your time.

□

1  
2 Nancy J. Victory, Chair of the Independent Panel  
3 Thank you very much. Dr. Vaughan.

4  
5 Dr. John Vaughan, Vice President  
6 Wireless Systems Business Unit, M/A-Com

7  
8 Thank you. I would like to thank the chair and  
9 the Commissioner and the whole panel for this  
10 opportunity to speak. I'm from M/A-Com, and we are  
11 a provider of two-way radio systems for mission  
12 critical communications.

13 Today we have heard a great deal of testimony,  
14 and I guess our point of view from that public  
15 safety point of view is in agreement with much of  
16 what we have heard today.

17 First and foremost, and I certainly agree --  
18 that operability or survivability is indeed the  
19 first order of business. From our point of view  
20 and from the lessons that we learned in Katrina and

21 in other storms across the Gulf Coast, there are  
22 critical design elements to a system, a public  
23 safety grade robust system, and if those elements  
24 are included in the system design, then  
25 survivability is very high; and there's a

□

1 tremendous amount of evidence in the Gulf Coast  
2 during Katrina that this is true.

3 In fact, I think the next speaker is even more  
4 of an expert than myself, and I will leave a lot of  
5 that discussion to him.

6 suffice it to say that for systems which are  
7 absolutely critical, they must include critical  
8 design elements in their design, and those elements  
9 are known today. The inclusion of those elements  
10 in systems in the Gulf region during Katrina bear  
11 out that fact.

12 The second issue is also discussed here, and  
13 that is the recovery. After the storm, there must  
14 be the opportunity for recovery, and along those  
15 lines, some of the issues that were discussed today  
16 with credentials and so forth are very, very  
17 important.

18 The second thing also in the recovery category  
19 is the issue of, after survivability is mobility,  
20 and we certainly agree that the idea of mobile

21 units that can be sent to the areas for recovery  
22 are very, very important for mobilizing  
23 communications resources; and that evidence is born  
24 out in a number of disasters.

25 But even if you do those two things, even if

□

1 everything operates and we have mobile units ready,  
2 we're still stuck with the big problem, and the big  
3 problem, as we know, as we've heard today, is  
4 interoperability.

5 It's everyone's problem and no one's  
6 responsibility, and that's the issue that we  
7 obviously have to get over. What we believe and  
8 what there is evidence of is that there is an  
9 opportunity for us now to leverage technology, and  
10 the technology that we believe needs to be  
11 leveraged is IP technology.

12 I liked Mr. Allen's comment about the  
13 interoperability protocol. I hadn't heard that one  
14 before. But, clearly, IP protocol is an important  
15 part of the solution.

16 Another important part of the solution as we  
17 know and we have heard today, a number of people  
18 came to help, and they came; and they brought  
19 radios with them. But there was nothing for them to  
20 talk to on those radios.

21 You know, the lesson that we learned was if

22 you're going to help -- in order to help, you have  
23 to communicate. In order to communicate, you have  
24 to interoperate.

25 So we suggest some simple steps that we can take

□

1 that are really not invention, but they are, we  
2 hope and we believe, innovative; and we need to be  
3 innovative to solve a problem as complex as this  
4 one.

5 First, we believe that all the mutual aid  
6 channels, which are already available, which are  
7 already set aside by the FCC, should be lit up  
8 across the country. We do the statewide network in  
9 the state of Florida, and the State of Florida is  
10 busy lighting up those mutual aid channels in all  
11 bands, VHF, UHF, and 800, everywhere in the state.

12 What I mean by that is that when all was said  
13 and done, the entire state of Florida will be  
14 entirely covered by all of the mutual aid channels.  
15 That approach, we think, is very, very important.

16 What does that mean?

17 That means that in the future when someone comes  
18 to help Florida during a disaster, they will have  
19 radio assets, mutual aid channels. Every radio  
20 that is out there knows how to use mutual aid  
21 channels. Just about everybody out there has been

22 trained in how to use mutual aid channels so that  
23 when those people come, they'll have infrastructure  
24 to talk to.

25 Let us take what we've learned from that lesson

□

1 and spread that across the United States. In  
2 addition, we all know that the federal folks, when  
3 they come to help, are operating in another band,  
4 in MTIA. Perhaps not this committee, but the NDI  
5 needs to do the same thing. They need to deploy  
6 their mixed use or let's call them their equivalent  
7 of mutual aid channels across the country in  
8 support of federal users who go to the location of  
9 a disaster.

10 Now, the most important part, the most important  
11 part is that all of those assets need to be on the  
12 same network. We suggest that we create a national  
13 interoperability network for disaster recovery. It  
14 should be IP based, as we've already said. It  
15 should be robust and reliable because it is a  
16 public safety system. It should be based on  
17 standards like P25 and Internet protocol, and such  
18 a network can and should be deployed and used  
19 across the United States to tie together the mutual  
20 aid channels, the NTIA channels and, yes, the local  
21 channels that belong to federal -- excuse me --  
22 that belong to the local first responders across

23 the country.

24 By creating one network, we can create an  
25 opportunity to connect the existing infrastructure,

□

1 the existing radio infrastructure, to add the new  
2 channels, the mutual aid channels, the NTIA  
3 channels, and allow everyone to be able to talk.

4 You know, it's akin -- if we look back in  
5 history, it's akin somewhat -- if we go back to the  
6 Eisenhower administration and think about an  
7 interstate highway and how do you go about building  
8 an interstate highway.

9 well, you do provide some federal funding and  
10 some federal coordination, but it happens in the  
11 states and the localities. You create a backbone,  
12 and then to that backbone, we connect the local  
13 roads in the case of the interstate highway system.

14 A similar model needs to be applied here for  
15 communications. We need an interstate  
16 interoperability network that solves the problems,  
17 that provides a back bone for communication during  
18 disaster recovery, and we need to provide the  
19 funding to local people to be able to connect those  
20 systems, including the mutual aid and the NTIA, to  
21 such a network.

22 An example of a network like this actually

23 already exists. The Maryland Eastern Shore  
24 Interoperability Network along nine counties along  
25 the Atlantic Ocean includes in its interoperability

□

1 network nine counties, 57 municipalities, 80 fire  
2 companies, 61 emergency medical agencies, 8 state  
3 agencies, 7 federal agencies, and 3 utilities. All  
4 those people that I just mentioned in those  
5 counties interoperate across an IP network --  
6 already happened, and it already works.

7 Now, that's only nine counties. So we have  
8 something over 3,000 more to go to do the United  
9 States, but it is a good place to start; and we can  
10 see where the future is by looking to cases, as I  
11 said, to Florida where mutual aid channels are  
12 already being deployed, to Maryland Eastern Shore  
13 where interoperability is already being deployed  
14 and combining these two ideas.

15 Finally, we recommend the following: This  
16 year's Reconciliation Act directs NTIA to grant \$1  
17 billion in funds to public safety to improve  
18 interoperability consistent with DHS guidance for  
19 systems that can use or interoperate with 700 MHz  
20 radios.

21 DHS allows for funding for technology included  
22 P25 so long as it improves interoperability and it  
23 is compatible with P25.

24 IP-based networks enable interoperability  
25 between 700 MHz radios and other existing and

□

1 future radio systems -- are the ideal realization  
2 of the Reconciliation Act. In addition to funding  
3 directly to public safety which will enable public  
4 safety to acquire IP interoperability, DHS should  
5 install a federal IP back bone pursuant to  
6 Executive Order 12472 connecting local, state,  
7 tribal, and federal emergency personnel.

8 And, finally, under that same Executive Order,  
9 Section 316A1, the FCC should issue a blanket order  
10 modifying public safety licenses to require  
11 licensees, subject to funding from NTIA, to install  
12 the necessary transmission equipment and IP  
13 connectivity equipment to make their mutual aid  
14 channels operational and connect with federal IP  
15 network for disaster recovery. Thank you very  
16 much.

17

18 Nancy J. Victory, Chair of the Independent Panel  
19 Thank you very much. Mr. Tusa.

20

21 Dominic F. Tusa, Radio Communications Consultant  
22 Tusa Consulting Services, Inc.

23

24 Good afternoon. I'm Dominic Tusa, founder and  
25 principal consultant for Tusa Consulting Services

□

1 in New Orleans. My firm, as a subcontractor to  
2 Moses Engineers, Inc., was responsible for the  
3 design, implementation, oversight, and acceptance  
4 testing for three public radio networks directly  
5 impacted by the force of Hurricane Katrina. Those  
6 were the City of New Orleans, St. Tammany Parish,  
7 Louisiana, and also Harrison County, Mississippi.

8 Today I would like to offer a perspective of key  
9 issues that should be of relevance to the panel's  
10 on-going investigation specific to public safety  
11 communications networks. Unfortunately, ten  
12 minutes doesn't provide very much time to do that,  
13 and I provided a written overview and description  
14 of these issues I believe need to be investigated;  
15 and that is in my written submittal and also  
16 supplied to you electronically.

17 But it is very important for the panel to  
18 understand the actual conditions on the ground from  
19 the perspective of those that were tasked with  
20 maintaining and supporting the network operations  
21 during the period in question, and it is  
22 recommended that the panel request statements from  
23 key personnel that were there. It's essential to  
24 do that in order to get a clear assessment of what

25 actually was going on.

□

1 Two personnel from the New Orleans Police  
2 Department should be included, Major James  
3 Treadaway and Captain Steven Gordon; with the New  
4 Orleans Fire Department, Mr. Peter Caruso and  
5 Thomas Levy; within the airport, Armstrong  
6 International Airport, Mr. John Lyons, Director of  
7 Communications, and, finally, from New Orleans EMS,  
8 Ms. Brenda Ireland.

9 Again, these people were on the ground actually  
10 during the event, working to restore public safety  
11 communications during the harshest conditions  
12 anyone could ever imagine. The City has provided  
13 central information concerning these activities,  
14 but in the case of oral accounts, little bits and  
15 pieces always drop in the relay process in the  
16 attempt to consolidate information into a form  
17 that's easily digested; but today's investigation  
18 can't deal with summaries. You have to have the  
19 specific bits of information, hear it all, to  
20 understand what actually happened and what  
21 contributed to some of the failures.

22 Much has been published about the inability of  
23 key radio technicians to gain return access to New  
24 Orleans. It is imperative that a nationwide

25 identification system be developed to facilitate

□

1 that re-entry.

2 These personnel were equipped with letters from  
3 the City Police Department allowing them access  
4 back into New Orleans, but for whatever reasons,  
5 they wouldn't allow that access; and it contributed  
6 to a situation. The radio system stayed silent for  
7 far too long.

8 The damage to the city of New Orleans' radio  
9 system itself was very slight. It required really  
10 just hours of work, two tubes of Stop Leak and a  
11 radiator and some water, and the radio system was  
12 back on the air.

13 Much, too, has been said that the communications  
14 failures within New Orleans were the result of  
15 incompatible radio systems. That's a gross  
16 simplification of on-site realities. These  
17 networks failed due to a combination of what I  
18 believe are four reasons, key reasons: Prolonged  
19 loss of reliable electrical power, insufficient  
20 site planning in flood-prone, hurricane-vulnerable  
21 areas, and over-reliance on leased infrastructure  
22 connectivity, and a lack of ongoing user personnel  
23 training.

24 The generators, as has been discussed before,  
25 has been a key problem with all communications

□

1 networks, not just our public safety systems, but  
2 also in the telecommunications field as well. It  
3 was difficult to maintain fuel sources. In the  
4 case of diesel-fired generators, our experience  
5 with them was horrible. They were extremely  
6 problematic and continued to fail to the point that  
7 we had to have technical resources attached to the  
8 radio systems control point.

9 The City of New Orleans as well as St. Tammany  
10 and Harrison County utilized 800 MHz simulcast  
11 radio networks, and these networks have a control  
12 location that synchronizes the timing and  
13 signaling to the various sites; and it's essential  
14 that the site be operational at all times.

15 And in the case of New Orleans, it was supported  
16 by dual generators as well as a battery back-up  
17 system. The generators, coming from a variety of  
18 different manufacturers, continued to have failures  
19 to the point that you had to have someone there  
20 24/7 to keep it operational.

21 And, surprisingly enough, even though we had  
22 been working aggressively to get commercial power  
23 restored at these sites, the control point operated  
24 on generator power for 133 days.

25 Complex communication networks involving

□

1 multiple sites such as simulcast require no-break  
2 interconnectivity between those sites in order to  
3 maintain their functionality. There are two ways  
4 in which this is done, either with leased telephone  
5 circuits or on microwave networks.

6 In the case of all three of the radio systems  
7 that I have intimate knowledge, all three utilize  
8 microwave backhaul, and all three were able to  
9 maintain that connectivity with the one exception  
10 in Harrison County. We had one antenna that was  
11 blown off course.

12 But when you own your own facilities and you  
13 have agreements in place with service providers,  
14 you can get restoration of service quickly, which  
15 you can't get with a leased telephone network.

16 In the case of Harrison County, they were able  
17 to get their microwave antenna re-swung and on path  
18 within a day. It was much more problematic in New  
19 Orleans. For three days, snipers were keeping the  
20 radio technicians from swinging the antenna on the  
21 control point site.

22 Without question, leased telephone facilities  
23 offer the most expeditious and least costly  
24 approach. Yet these are the most prone to failure  
25 as overhead and buried networks are subject to

□

1 damage anywhere along the routings from the control  
2 point site to the remote transmitter site.

3 For this reason, we think that you should  
4 consider or at least investigate how microwave  
5 connectivity improved the reliability of these  
6 public safety networks and kept them whole.

7 Finally, urban public safety radio networks are  
8 not static in their design. As user needs change,  
9 so must the capabilities and features of the  
10 networks. The majority of new features are  
11 embedded within the infrastructure, the tower  
12 sites, that make the radio system work.

13 Most people think a radio system is the radios  
14 that the officer or the firemen hold in their hand.  
15 That's just a small piece of it. The real action  
16 are the tower sites and the control points that  
17 make it operate as a network.

18 But the changes to these networks as they  
19 occurred, generally infrastructure related, they  
20 don't show up in the user equipment, but they are  
21 of a scope that should require remedial training of  
22 personnel. Yet training is the first thing that's  
23 cut from every budget. It's a soft expense. No  
24 one really sees the value of it.

25 Yet when you have a situation like a Katrina

□

1 when your normal communications are disrupted, even  
2 though your radios have embedded in them channels  
3 for direct communications, mutual aid  
4 communications, a whole host of work-arounds, if  
5 the personnel are not trained in how to use them,  
6 they're useless. They don't even know they exist.

7 Further, federal grant programs must be expanded  
8 to allow improvements and enhancements to existing  
9 radio infrastructures. It's one thing to talk  
10 about new interoperable P25 radio systems, but what  
11 about the systems we have today? They have to work  
12 tomorrow. They have to be ready for the next  
13 hurricane season.

14 It takes years to implement public safety P25  
15 radio networks. We don't have the time.

16 The City requires repairs and replacements of  
17 power generators and battery equipment now in order  
18 to be prepared to face the 2006 hurricane season.  
19 Yet bureaucratic red tape is holding up these  
20 needed repairs and exposes the City and its public  
21 safety users to great harm at unacceptable risk.

22 In closing, I wish to thank the panel for this  
23 opportunity, and I welcome any questions.

24 MS. VICTORY: All right. Thank you  
25 very much, Mr. Tusa.

□

1                   From our panel, I'm sure you have some  
2 questions. Go ahead, Steve Davis.

3                   MR. DAVIS: Yes. Steve Davis. I have  
4 got a question for the gentleman with Tropos  
5 regarding this wireless metro mesh router.

6                   Is that basically a regular WiFi  
7 system, or is the range greater than WiFi?

8                   I guess I'm trying to figure out how  
9 that would be implemented in a larger recovery  
10 effort.

11                  MR. MOBIAS: The communication from  
12 that radio that you see on the diagram down to the  
13 client level is via standard WiFi, and you are  
14 governed by some of the distance limitations that  
15 WiFi does have.

16                  So, in general, we have these radios  
17 installed between 1,000 to 2,000 feet away from the  
18 client that we're trying to reach. The only  
19 exception to that is, as you see in the picture,  
20 there's a police car on there. We do have mobile  
21 units for police cars, and that's a much  
22 higher-powered radio; and in some of those  
23 instances, we're talking about a mile range from  
24 the radio in the car to the radio on the telephone  
25 pole or the power pole.

□

1                   MR. DAVIS: Okay. The Motorola canopy  
2 wireless backhaul, how common are those, and what  
3 is the distance that you would have to have from a  
4 metro mesh router to a wireless backhaul?

5                   MR. MOBIAS: The general rule of thumb  
6 -- and this is generally only -- it's about for  
7 every ten Tropos nodes on light poles, you have one  
8 backhaul node. The most common for us happens to  
9 be Motorola canopy. There are other options as  
10 well. Some could be directly connected to  
11 satellite as we did in most of our temporary  
12 installations after Katrina. Some others could be  
13 directly connected to fiber optic cable.

14                   But canopy is the most common that we  
15 use, and it's very secure and very resilient. The  
16 distances of those can be anywhere from one to  
17 twenty miles.

18                   MR. DAVIS: Is that operating on Part  
19 15 spectrum, or is it operating on licensed  
20 spectrum?

21                   MR. MOBIAS: It's generally unlicensed  
22 spectrum, the most common 5 gig, 5.2 to 5.8.

23                   MR. DAVIS: Thank you.

24                   MR. MOBIAS: You're welcome.

25                   MS. VICTORY: I think Billy Pitts was

□

1 next.

2 MR. PITTS: Mr. Tusa, we appreciate  
3 what you say about trying to get something in place  
4 in the next 90 days, and we want to work with you;  
5 but in the longer term, I have a question for you  
6 and Dr. Vaughan.

7 MR. TUSA: Yes, sir.

8 MR. PITTS: If DHS created a standard  
9 of interoperability and would only fund states  
10 where systems had achieved that standard, could we  
11 achieve interoperability that way?

12 MR. TUSA: That doesn't solve the  
13 short-term problem.

14 MR. PITTS: I understand that. I  
15 understand that.

16 MR. TUSA: The problem is that these  
17 agencies need funding today to upgrade their  
18 communications systems they currently have to make  
19 them hardened. Now, there should be a two-step  
20 approach. There should be a mechanism to provide  
21 for short-term improvements to radio networks and a  
22 longer-term vision to support those long-term  
23 interoperability needs to get the nation to a P25  
24 network.

25 That's effectively what we would like

□

1 to see, but you can't do that instantaneously.

2 MR. PITTS: And I understand that.

3 No. I was talking about the longer term.

4 MR. TUSA: Yes.

5 MR. PITTS: And we do want to work  
6 with you in the near term because we're all  
7 concerned about that.

8 MR. TUSA: Thank you.

9 DR. VAUGHAN: Certainly I would agree  
10 with Nick that survivability is still first, which  
11 I think is a point we all agree. You asked the  
12 question, if we had a standard -- I'll call it a  
13 standard interface or connection -- is it possible  
14 to solve interoperability nationwide? The answer  
15 is yes.

16 I mentioned the Maryland Eastern Shore  
17 Interoperability Network. I could imagine the  
18 national capital region, which is the US Army and,  
19 soon, the US Navy, which is a series of garrisons  
20 from Washington, DC, up to upper New York, and that  
21 includes not just the garrisons which are P25, but  
22 58 connections, interoperability connections to  
23 local, state agencies around the garrisons; and  
24 that has already been tested in some instances and  
25 has proven to be very, very effective in operating

1 the P25 piece in connection with the Legacy  
2 systems.

3 I think that is what Nick is saying.  
4 The first thing we have to do is make sure that  
5 what we have survives this year, and then as we  
6 look down the road, we need to connect together  
7 that, which we have and get that to talk to each  
8 other. Then we can use that to migrate to the new  
9 technologies at 700 MHz or P25 or whatever it is.

10 And that's what the long-term plan  
11 should be, and the most important piece of that is  
12 that we do it all on one network.

13 MS. VICTORY: Can I ask a follow-up  
14 question on that?

15 DR. VAUGHAN: Sure.

16 MS. VICTORY: My understanding of the  
17 monies that are now going to Homeland Security --  
18 and I'm not an expert on this or focused in on the  
19 700 MHz band and some of the spectrum that is being  
20 made available -- does it make sense in your  
21 opinion or any of the panelists for monies  
22 associated with the 700 MHz band to be solely  
23 dedicated to interoperative equipment since,  
24 presumably, these are new frequencies and perhaps  
25 new systems that are being built for it as opposed

1 to existing systems that may be in other bands,  
2 that they would be upgraded and improved through  
3 other mechanisms.

4 DR. VAUGHAN: Well, I think that --  
5 first of all, the 700 MHz spectrum is vitally  
6 important for other reasons; and that is, we're out  
7 of capacity and out of spectrum. And that's really  
8 what's terribly important about the 700 MHz  
9 spectrum.

10 Secondly, to answer your question,  
11 should some of the money be used for  
12 interoperability, the answer is absolutely. In  
13 fact, it's vital, and the reason is, remember, when  
14 we go to 700 MHz, there is no 700 MHz in the United  
15 States today.

16 MS. VICTORY: Right.

17 DR. VAUGHAN: So by its very nature,  
18 it will not interoperate with anything else.

19 So, therefore, interoperability is a  
20 vital part of the transition to 700 MHz.

21 So we certainly believe that there is  
22 within the Reconciliation Act and within your  
23 purview, the opportunity -- let's say -- to create  
24 the interoperability that will lead to 700 MHz  
25 rather than necessarily expending all the money

1 exclusively on 700 MHz equipment which, in fact,  
2 may not interoperate.

3 MS. VICTORY: Okay. Thank you very  
4 much. We have Mike Anderson.

5 MR. ANDERSON: Could you talk about  
6 the interference issues associated with Part 15  
7 devices?

8 MR. MOBIAS: It's a common question  
9 and concern. We generally operate in 2.4 GHz which  
10 is -- there's a fear that that's heavily occupied,  
11 and it is inside the house. Generally, Tropos  
12 operates exclusively outdoors.

13 So the interference levels in 2.4 gig  
14 outdoor we actually overcome simply by the fact  
15 that we're very high power and have very good  
16 receive sensitivity.

17 It's a completely different ball game  
18 indoors, and we do see noise outside; but we don't  
19 have interference generally that kills systems, for  
20 example.

21 So it's a fear that's partially  
22 because of other uses of 2.4. Microwave ovens are  
23 close to that, you know, 2.4 indoor home WiFi  
24 systems, et cetera, but outdoors we've never had an  
25 interference issue in 2.4 that we weren't able to

1 overcome, ever.

2 MS. VICTORY: Okay. Kay Sears.

3 MS. SEARS: This is a question for Dr.  
4 Vaughan.

5 I'm not an expert at all in two-way  
6 land mobile radio. But if I had a radio of one of  
7 your competitors, would I be able to talk to you if  
8 we are on the same frequency?

9 DR. VAUGHAN: If we are in the network  
10 that I described for interoperability where we're  
11 using a mutual aid channel, the answer is yes.

12 MS. SEARS: Do the mutual aid channels  
13 provide enough bandwidth to support first  
14 responders in a crisis?

15 DR. VAUGHAN: I could imagine a crisis  
16 in which they would not, in which case, as I  
17 mentioned, we really do need to add the mobility  
18 piece; that is, the mobile resources that we bring.

19 You need mobile resources to bring  
20 radio resources to a location because either there  
21 aren't enough resources there which may be true  
22 with regard to mutual aid channels or if the  
23 resources there have been damaged so great that  
24 they need to be replaced as we saw in Katrina.

25 MS. SEARS: So outside of the mutual

1 aid channels, it's your own private networks.

2 DR. VAUGHAN: No. I think what I was  
3 trying to describe was a network of mutual aid  
4 channels and the FCC and the NTIA bands which are  
5 connected together with the state and local FCC  
6 channels, and if that capacity, for whatever  
7 reason, is not enough -- and we certainly can  
8 imagine scenarios where it isn't -- just mobile --  
9 just -- a good example is when the cellular folks  
10 bring in COWS for a football game or a big event.  
11 If we have a big, bad event like a disaster, we  
12 need to bring in COWS. We, the industry, use, the  
13 two-way radio uses two-way radio COWS in the same  
14 way that cellular does.

15 So that's what you bring in.

16 MS. SEARS: So I guess my question --  
17 I didn't phrase it correctly.

18 Outside of that idea or solution, your  
19 customers are operating privately on the --

20 DR. VAUGHAN: Yes.

21 MS. SEARS: -- M/A-Com network.

22 DR. VAUGHAN: In general, the two-way  
23 radio public safety industry are indeed private  
24 networks. They're not public carrier networks.

25 MS. SEARS: So what stops you getting

1 together with your competitors to create a cellular  
2 like system where you are receiving radio calls  
3 from competing networks?

4 DR. VAUGHAN: We are, and that's under  
5 the -- you may have heard the phrase used a couple  
6 of times today called P25, and the standards for  
7 P25 are being worked on by the industry. The work  
8 is going very well. It has been accelerated by  
9 recent events, I would say, and I expect that the  
10 so-called intersystem interface, the ISSI document,  
11 is going to be validated later this year and  
12 approved by all the members of the industry; and  
13 that's an excellent step towards doing that.

14 Now, having said that, there's a vast  
15 amount of equipment out there that is not that new  
16 standard. Ninety some percent of all public safety  
17 radios that are out there are still analog. The  
18 cellular industry, as you know, is all digital.

19 when we move to a digital standard in  
20 two-way radio like P25, we are at the same time  
21 moving toward the standard that allows the  
22 interoperability of the type that you are  
23 referring.

24 MS. SEARS: So interoperability cannot  
25 happen in the analog environment.

□

1 DR. VAUGHAN: Not as it exists today.  
Page 253

2 There is just one extraordinary exception, and that  
3 is just what I said; and that is, you can take an  
4 analog radio and put it on a network. Then you can  
5 take another analog radio that the first one cannot  
6 talk to and put it on a network. And the two of  
7 them can talk to each other across the network  
8 instead of to each other directly.

9 MS. SEARS: Through a hub or --

10 DR. VAUGHAN: Through a gateway that  
11 turns it into an IP signal. That's right.

12 PANEL COMMENT: There is an existing  
13 technology used in the HAM radio community called  
14 IRLP, the Internet repeater linking project, which  
15 is an example of what he's talking about invented  
16 by HAM's for their own use, implemented in open  
17 source.

18 MS. SEARS: Thank you.

19 COLONEL BOOTH: Dr. Vaughan, I may  
20 have misunderstood you. Did you say there was no  
21 interoperability in the 700 MHz spectrum?

22 DR. VAUGHAN: No. What I meant was,  
23 within the 700 MHz, there is, but as you  
24 understand, the 700 MHz -- there is no 700 MHz  
25 infrastructure out there today. There are no other

□

1 700 MHz radios out. It's brand new. It's a green

2 field. It hasn't been built yet.

3           So when you build a 700 MHz radio  
4 system, you have to think very carefully about the  
5 interoperability that you're going to have with the  
6 non 700 MHz radio resources that are out there,  
7 which is, by the way, all the radio resources that  
8 are out there.

9           So all I meant to say was that if we  
10 build -- we should be careful not to build a 700  
11 MHz stove-pipe radio system that doesn't talk to  
12 all the other UHF, 800, and all the other resources  
13 that are out there.

14           we need the 700 because we need the  
15 capacity, absolutely, no doubt about it, and it is  
16 the newest spectrum that's made available to us;  
17 but we have make sure that it interoperates with  
18 the other frequencies that are out there.

19           COLONEL BOOTH: The reason I ask was  
20 because we are installing a 700 system now, and a  
21 good bit of it is already operational. We haven't  
22 done the final acceptance testing on it, and we're  
23 getting good interoperability with the other  
24 frequencies that are operating in that area as  
25 well.

□

1           So, hopefully, we will have something  
2 good to offer to you in the very near future. I

3 think the important thing is to remember also that  
4 I believe it was the FCC that has encouraged the  
5 public emergency response community to move to 700  
6 MHz.

7 DR. VAUGHAN: Without a doubt, the 700  
8 MHz, as I said at the very beginning of my remarks,  
9 were it's very, very important because the capacity  
10 is absolutely required. Also, there's some very  
11 good features about it. It's sort of all digital.  
12 It's focused on P25.

13 But there are other things you need to  
14 worry about, and that is, it's not analog. There  
15 are ways -- and I'm sure in your system -- I'm not  
16 sure, but I assume in your system you have done  
17 some kind of interoperability patches or other  
18 approaches to interoperability.

19 And those are excellent things that  
20 we've all done for a number of years, and, you  
21 know, the great news is that we know they work; but  
22 what we also know is we know that they're not  
23 reliable. And that is, when we try to go beyond  
24 the interoperability that you created, that is, if  
25 federal guys show up, you know they're going to be

□

1 in a different band because they're at 380 MHz.  
2 They're completely different.

3 So what do we do then?

4 You know, it's not so much the issue  
5 of interoperability that we usually think about,  
6 which is me talking to my neighbors. That's what  
7 we usually think about as interoperability.

8 In Katrina, we had a different case,  
9 and that was we had overlapping jurisdictions.  
10 People came to help, and they couldn't talk to each  
11 other.

12 So when we think about radio systems,  
13 it's very important. When a new radio system is  
14 needed, you need to build a new radio system.  
15 Interoperability doesn't make old radios new,  
16 right? It just connects old radios.

17 So we need to think about both things,  
18 new radio systems as you are and connecting to  
19 legacy radio systems.

20 COLONEL BOOTH: Just recently we  
21 invited your company to give us a presentation on  
22 --

23 DR. VAUGHAN: That's right.

24 COLONEL BOOTH: -- a network switch  
25 approach to connecting these disparate types of

□

1 systems, and we're giving it serious consideration.

2 DR. VAUGHAN: Thank you. We  
3 appreciate that.

4 MS. VICTORY: Jim, do you have a  
5 question?

6 MR. JACOT: Yes. I have a question  
7 for the gentleman from Tropos.

8 You talked a little bit about the --  
9 you had on commercial power. You had some battery  
10 back ups before they were exhausted. I believe you  
11 had nothing beyond that.

12 I was wondering, what was the duration  
13 of the impact on your network through the loss of  
14 commercial power, how long before you substantially  
15 had your network recovered so you had usage of  
16 that.

17 MR. MOBIAS: The network in New  
18 Orleans, the areas that we were covering were very  
19 high crime areas. We built out the downtown and  
20 other areas that weren't as badly flooded after  
21 Katrina.

22 So it came up in zones, basically. As  
23 soon as power was restored to a pole, that radio  
24 comes up, and when it can see another pole, another  
25 radio and make its way back out, then it basically

□

1 fully restores communication to anyone in its area.  
2 Until it can see all the way back, it just sits  
3 there and is looking and waiting.

4                   So that network came up slowly as the  
5 power was restored. I think it started within the  
6 week, probably three days. We were actually  
7 installing new radios before the old system was  
8 fully back on line.

9                   That network now is 100 percent  
10 operational, and we had actually added to it; and  
11 we provided video for the whole Mardi Gras parade  
12 route that was mostly new, for example, afterwards.

13                   But, yeah, it took several weeks  
14 before the whole network was back for the power.  
15 We also started using some solar in areas as well,  
16 but none of those radios were solar powered before.

17                   And so that's starting to change a  
18 little bit as well.

19                   MR. JACOT: Was solar power able to  
20 reliably provide enough power to keep the network  
21 up?

22                   MR. MOBIAS: Sure. We can definitely,  
23 we can power them indefinitely. We have quite a  
24 few radios with solar.

25                   The only issue with solar is just

1 unless you're planning for the need to have solar,  
2 it adds cost, and it adds more items to maintain;  
3 and, also, then, your wind loads -- we can survive  
4 with our radios, you know, 160 mile an hour wind

5 loads. A lot of solar, because it's large panels,  
6 can't survive that.

7 So it just adds a lot of engineering  
8 into a network. It's a lot easier to talk about  
9 solar now after Katrina than it was before.

10 MR. JACOT: Thank you.

11 MS. VICTORY: Bob Dawson.

12 MR. DAWSON: Bob Dawson, SouthernLINC  
13 wireless -- I stay confused over interoperability  
14 and Project 25's, and Dr. Vaughan or maybe even  
15 Kelly, could you help me understand.

16 Can you have interoperability without  
17 having Project 25, and does the whole labeling of  
18 Project 25 put more complexity on it than maybe as  
19 needed. It may be wanted, but maybe not needed in  
20 order to get to where people want to get for  
21 operability and then maybe interoperability.

22 DR. VAUGHAN: Well, it's all good  
23 news, and that is that the good news is that, yes,  
24 you can have interoperability without Project 25,  
25 and the good news is that if you have P25, you'll

□

1 have more interoperability than you would in the  
2 first case.

3 Let me give you a clear example. All  
4 the folks in this room who are public safety and

5 some of whom are implementing P25 systems or will  
6 absolutely will not have -- let's call it  
7 interchangeability. They're not to be able to  
8 interchange or interwork with the federal guys who  
9 are also P25, and the reason is the federal guys  
10 are in a different frequency band.

11                   So P25 alone doesn't necessarily  
12 guarantee interoperability. Within your band,  
13 however, it does.

14                   So I say it's good news and good news.  
15 First of all, the good news is we don't have to  
16 spent \$40 or \$60 billion to make everybody P25  
17 because that's about what it would cost across the  
18 United States. The good news is that we can do  
19 interoperability as I just describe and create  
20 that.

21                   But as we go forward, if within your  
22 band you want to have interoperability, then P25 is  
23 a good standard and a good way to do that. Does  
24 that help?

25                   PANEL COMMENT: There are obviously

□

1 several levels of interoperability depending upon  
2 definition from Level 1 through 6. Gateways are  
3 part of that. It's not the most elegant solution,  
4 but it is a short-term solution to giving  
5 interoperability.

6 Is it mission critical?

7 We would argue no. It is a gateway  
8 approach that does not give the robustness of what  
9 true mission critical is.

10 Project 25 is not a new standard.  
11 It's been around since 1992. It was user-driven  
12 standard. To date there's now 23 manufacturers  
13 manufacturing the P25. Phase 2 is a standard  
14 that's being worked out to where it will be  
15 backwards and frontwards migratable so that it will  
16 incorporate both old technology as well as new.  
17 You can have a mixed fleet of 800 MHz and a mixed  
18 fleet of 700 MHz. You can have analog. You can  
19 have digital, and you have the capability to have  
20 interoperability.

21 It's a Department of Homeland Security  
22 initiative. Department of Defense has mandated it.  
23 It's being implemented nationwide. It is not  
24 anything that is new. It is based on IP protocol  
25 that brings in all the newer technologies and

□

1 solutions that are coming out. Utilizing IP with a  
2 user-driven standard gives the ability to connect  
3 everyone.

4 Now, within those everyone clouds is  
5 who talks to who, who has priority, who's going to

6 have the ability in a disaster to knock top groups  
7 down, bring people up, interface with all the  
8 different groups that are represented on the panel  
9 as well as the distinguished guests that have come  
10 in to speak to us.

11 So it's nothing new. It's been  
12 mandated in a lot of different things, and, again,  
13 within Project 25, there's a clear set of  
14 guidelines; and Phase 2 is coming about that's  
15 incorporating some other interface standards that  
16 manufacturers either will choose to adhere to or  
17 not. But it's not a manufacturing standard. It's  
18 a user standard that was driven for this very  
19 purpose, interoperability.

20 PANEL QUESTION: Somebody told me that  
21 we have been talking about interoperability or some  
22 people have for 30 years, and we're still not  
23 there.

24 If that 30 years is close to being  
25 right, do you think in our lifetime, given the fact

□

1 that you've got all the personalities out there,  
2 all the politics that will come to play, that  
3 you'll see interoperability on the scale that you  
4 probably need for wide-area catastrophes?

5 DR. VAUGHAN: Well, if that's a  
6 question to me, it's not a technology. It's a

7 people issue, and the private sector is not going  
8 to solve it. The public sector has to solve this  
9 because it's Cities getting along with Counties,  
10 Counties getting along with States, and States  
11 getting along with Federal and being able to give  
12 up some kingdoms and control and actually wanting  
13 to have interoperability to where now you can share  
14 the resources and be able to talk to each other.  
15 Technology is there today.

16           PANEL QUESTION: I agree. It is not a  
17 technology issue. It goes very much back to the  
18 first meeting this morning and Dr. Saussy who said  
19 -- I guess I'll paraphrase it -- said that in order  
20 to interoperate, you have to kind of  
21 intercommunicate.

22           The technology will follow the policy  
23 if the policy goes there.

24           PANEL COMMENT: To give you a little  
25 bit hope, in the consumer industry, we have got it.

□

1 It's working. There are people in the room here  
2 who are using wireless networking to check their  
3 e-mail or what not.

4           So the fact is the industry can do it  
5 when it needs to, when there's money at stake.  
6 Probably the right answer when the Government gets

7 involved is to tie interoperability into the  
8 funding. Everyone knows that, but then it gets  
9 knocked down by lobbyist.

10 MS. VICTORY: Let me ask a follow-up  
11 question. You just mentioned tying into the  
12 funding.

13 I was going to ask the panelist, what  
14 are the other things that can be done in your  
15 estimation to facilitate interoperable solutions  
16 being implemented?

17 MR. BEARY: Tie it into Department of  
18 Homeland Security grants. It's all about the  
19 money, and if you don't comply, you don't get the  
20 money. I'll throw another idea out, Nancy, if I  
21 can.

22 MS. VICTORY: Please do.

23 MR. BEARY: And I will throw it to  
24 M/A-Com and Motorola. You know, for instance,  
25 about 20 years ago or thereabouts, we went into a

□

1 20 some million-dollar system in Orange County,  
2 Florida. Is there a way, instead of communities  
3 having to come up with \$20 million and the systems  
4 last for about 14 years and you've got to start  
5 looking for the next \$60 million fix. Is there a  
6 way out of some of these communications companies  
7 to have Counties and Cities pay -- I threw out --

8 just for example purposes -- my agency pays \$4  
9 million. You keep the system upgraded and the  
10 whole nine yards, and I'll pay you \$4 million a  
11 year so that I've got capability; and, that way, I  
12 don't have to put out all that CIP money at \$20  
13 million. I like thinking like that in the future  
14 because I think that -- with technology, it's  
15 changing every day, folks.

16                   You know, I come in today, and my  
17 counterpart, Greg, is sitting here with this new  
18 Sprint device, you know. I think we need to start  
19 looking at that at county and city level. What can  
20 we do and what can we work with our major  
21 manufacturers so that we can keep up to date with  
22 everything changing just like that.

23                   PANEL COMMENT: I think that's a  
24 fantastic idea, and I think that's a great  
25 opportunity for those in this audience who are

□

1 either communications or equipment vendors. You're  
2 talking about moving to more of a cellular model as  
3 opposed to an owning your own infrastructure model.

4                   I don't know how your funding works,  
5 but if that would work within your funding scheme,  
6 I think that is really a good way to go.

7                   PANEL COMMENT: There are business

8 models out there. We own the State of South  
9 Carolina system. We have for years. We manage it.  
10 We do technology refresh. We bring other agencies  
11 on, not only with the State, but Locals as well,  
12 Counties, Municipalities, hospitals.

13 So there are several instances, and  
14 I'm sure others on the panel have instances where  
15 they've had build, own, and operate back to some of  
16 their customers as well.

17 So that's clearly a model that we're  
18 doing today, and we would be more than happy to  
19 entertain that with anyone.

20 PANEL COMMENT: Without a doubt, I  
21 think the financial model that Mr. Kirwan has just  
22 mentioned is part of the solution, but I took your  
23 question in a slightly difference sense, and that  
24 is -- I'll put words in your mouth if you don't  
25 mind.

□

1 When can I start buying evergreen  
2 systems? When can I start buying a system that can  
3 be upgraded -- let's say -- like my IT systems are  
4 upgraded?

5 And I guess the answer is -- I  
6 mentioned earlier, you know as much about the  
7 industry as anybody -- that the analog to digital  
8 transition is happening today. I guess my own view

9 is that's not good enough. You really need to go  
10 to IP.

11 When you go to IP, when you're end to  
12 end IP, when your switch is IP and everything in  
13 your system is IP, then it begins to look like an  
14 IT system; and then and only then can you begin to  
15 look at technology refreshments that represent this  
16 kind of evergreen system that grows in capability  
17 and capacity over time. So it goes hand in  
18 hand with the technology. So there's hope.

19 MR. ALLEN: I would like to give my  
20 impressions on how to proceed as a complete  
21 outsider. I don't know anything about FEMA  
22 funding, and I don't know anything about the world  
23 that you come from.

24 I'm an IT guy, and what I learned this  
25 year is how to make a volunteer project work; and

□

1 the way we made it work was with consumer  
2 equipment. It's unreliable, and it breaks; and you  
3 have to engineer around it and things like that.

4 But it was available to us, and we  
5 were able to build something; and we showed  
6 interoperability the day that we turned it on  
7 because a Florida police person sat down. We  
8 re-configured the network to work at our location,

9 and then she was checking her e-mail back home and  
10 getting duty assignments from the guy sitting next  
11 to her.

12 The point I'm making is that you don't  
13 need to wait around for someone to tell you how  
14 their P25 system is going to work with Harris or  
15 M/A-Com. Probably what you need to do is find  
16 experienced consultants like Mr. Tusa and engineer  
17 systems from components that will last the test of  
18 time just like Dr. Vaughan said. That's what we  
19 did, and it works great.

20 MS. VICTORY: Marion Scott, I think  
21 you were next.

22 MS. SCOTT: I was just going to dove  
23 tail on what Sheriff Beary said, and that is that  
24 when we take advantage of federal funding such as  
25 the E rate funding for schools, the question is not

□

1 the initial capital investment. The question is  
2 the operating expense that follows that, the  
3 inevitable depreciation and the expense to keep it  
4 up and keep it evergreen and that kind of thing.

5 So I think a lot of people have a lot  
6 of input into that, and we need to look at a better  
7 solution for our users.

8 MR. BEARY: If I could just go back to  
9 one thing Mr. Allen just said, and God bless him

10 for it. I just figured out somebody that didn't go  
11 through 40 barrels of red tape to change something  
12 at a command post so they could communicate better,  
13 and that's called leadership and decision making;  
14 and, my goodness, we got one. So I applaud you.

15 MR. ALLEN: Thank you very much. We  
16 did write down what we changed so she would be able  
17 to fix it when she got home.

18 MS. VICTORY: Carson, do you have a  
19 question?

20 MR. AGNEW: I was actually going to  
21 pick up on something you asked a few minutes ago  
22 which was what other things the FCC could do and  
23 remind the group that although the FCC is a little  
24 schizophrenic at times, there have been many times  
25 in the past when they have mandated communications

□

1 standards for licensees, NTSC being a case in point  
2 and AMPS, both of which forced the industry and the  
3 operators to get together on a time table to get  
4 something done.

5 And there was a lot of complaining  
6 about the timetable, but, by and large, it  
7 happened. It's worth thinking about unless you  
8 want to wait 'til 2023.

9 MR. DEAN: I have two. One, Jeff,

10 when you were building your system, how long did it  
11 take for you to get something up and operational  
12 that could be some semblance of a system that could  
13 be used by emergency responders?

14 MR. ALLEN: Right. Great question.  
15 The example I gave about helping a visiting  
16 policeman stay connected to her home resources was  
17 an example of us acting as IT people in an existing  
18 environment.

19 So we had been invited into the  
20 Hancock County EOC. They were getting some IT  
21 support from their GIF people, from the mapping  
22 folks, but, you know, we were there.

23 And so they asked us for help. So  
24 that was an example of minutes of IT support to  
25 make somebody go from frustrated to effective.

□

1 You're asking about building a  
2 network, and what we learned about building  
3 networks is that there's two components to building  
4 networks that we did, building long haul and  
5 building a distribution network.

6 So we brought wireless -- we brought  
7 IT connectivity of a terrestrial high speed, high  
8 quality type from MCI in Gulfport into the disaster  
9 area. Well, Gulfport was, too, but Gulfport  
10 survived quite a bit better than Waveland.

11                   So we brought that 30 miles via  
12 wireless technology. That's incredibly difficult  
13 work. It's hot. It's hard to climb towers. You  
14 have to do a little bit of political stuff to get  
15 permission to the towers. It took way longer than  
16 we thought it was going to take.

17                   Meanwhile we were building a  
18 distribution network, and we were able to  
19 redistribute IT access, Internet access we found in  
20 the area. The public information office gave us  
21 access to one of their satellites.

22                   And so, basically, we were able to  
23 build in days a distribution network to share a  
24 resource that Hancock County had on hand with the  
25 residents of Hancock County. So this is a

□

1 satellite that had been re-characterized by them as  
2 a hot stand by.

3                   And they said, "When we need it, we're  
4 going to come take it away from you, and you guys  
5 better -- you know, you'll have to be ready for  
6 that."

7                   And we said, "We can accept that."

8                   And so we got to use it, and then we  
9 built a network around it.

10                   What I learned is that you plan to use

11 the Internet you find or are given or bring with  
12 you in the form of satellite, and then you plan to  
13 switch to the best Internet you can get later  
14 because Internet has different characteristics,  
15 latency, quality, bandwidth; and there's no such  
16 thing as -- depending on the quality of the  
17 Internet, you might not be able or you might choose  
18 not to run certain applications over it.

19 For instance, we never used -- we  
20 didn't do voice telephone -- telephony over  
21 Internet until we had a terrestrial link.

22 MR. DEAN: You led me into the second  
23 part in saying that you had encountered this lady  
24 who was frustrated.

25 Most people in public safety are A

□

1 type personalities. These are very aggressive, and  
2 they want things to happen now; and they want a  
3 duck to look like a duck. Okay.

4 They don't care what the name is on  
5 it, but if it says Motorola and it's not working  
6 and you give us something that says XYZ, as long as  
7 it looks like this one, it's okay.

8 As we go through this process with  
9 these disasters, I mean, we're talking about  
10 Katrina, and we've gotten away from New York; and  
11 if we have a 9.2 earthquake on the West Coast

12 tomorrow, we're going to forget Katrina. And we're  
13 going to be talking about San Francisco.

14 MR. ALLEN: That is my hometown.  
15 Y'all have got to come help us.

16 MR. DEAN: We are going to worry about  
17 communicating in San Francisco when we get there  
18 because the towers aren't going to be up, and  
19 that's what we're going to need from the public  
20 safety side. The interoperability and connectivity  
21 and all that is great. But the bottom line, you've  
22 got to be operable before you can be inoperable,  
23 and that's what we're looking for, is the solution  
24 from everybody here to be operable first because  
25 I've been in this business for 32 years.

□

1 And you can plan for everything that's  
2 going to happen, and the one thing that you don't  
3 plan for is the one you're going to get, you know.  
4 I mean, that's just the way it is. That's life.

5 We've got to find a way to make some  
6 recommendations to the FCC to help the entire  
7 community from industry to public safety to the  
8 people on the street at all levels how we can  
9 provide services to them, and communicating under  
10 the best of conditions is the hardest thing we do  
11 every day; and we're looking for input from you

12 folks who have come and done an excellent job today  
13 and from all the expertise that we have around this  
14 table to come up some type of recommendation to get  
15 to that operability in these very, very difficult  
16 times because the interoperability is in the best  
17 of times when we don't have all these disasters  
18 going on.

19 MR. ANDERSON: This isn't just for our  
20 guests. I guess it's for us as a panel as well.

21 we have heard about the 700, 800, 900,  
22 WiFi, 2.4, and other license. Nobody has mentioned  
23 what has be released a few years ago. The FCC  
24 released 4.9 GHz to public safety. I've heard no  
25 mention of that whatsoever, and I'm just wondering

□

1 why is it not being used for its intended purpose.  
2 Is it the limitations of the spectrum? Is it  
3 nobody just jumped on the bandwagon for it?

4 PANEL COMMENT: We are deploying 4.9  
5 mesh technologies throughout the country right now,  
6 public safety grade, mission critical data, mesh  
7 technology.

8 PANEL COMMENT: It may be that the  
9 reason you haven't heard about it is that there are  
10 no problems. It's going very well. The standard  
11 is progressing very well. The technology is  
12 progressing very well, and I have no doubt that the

13 deployments will continue and grow over the next  
14 few years.

15 MS. VICTORY: Sheriff Beary.

16 MR. BEARY: I have got one for Kelly  
17 or Dr. Vaughan. This comes from my communications  
18 guru because I'm one of those ones who turn it on  
19 and make it work.

20 will the IP connection network we are  
21 talking about allow a 700 radio to talk in an area  
22 outside its normal coverage zone?

23 DR. VAUGHAN: The answer is yes. As  
24 long as we have the mutual aid channel there, yes.

25 MR. BEARY: Thank you.

□

1 MS. VICTORY: Steve Davis, do you have  
2 one?

3 MR. DAVIS: Yes. Very quick. And I  
4 just wanted to respond to Chief Dean.

5 I understand what you are saying about  
6 you have to have operability before you have  
7 interoperability, but I want offer this for the  
8 panel's thought; and that is, when you look at a  
9 disaster like an earthquake in San Francisco -- and  
10 one thing we've looked at is space diversity as  
11 opposed to simply frequency -- what I mean is, you  
12 have lots of different towers.

13                   So I would like to propose that if you  
14 really had interoperability, then you might use  
15 that to achieve operability because in San  
16 Francisco, probably, every tower isn't going to  
17 fall down.

18                   So if half the towers are working,  
19 then what matters is who cares if the tower you  
20 need isn't working, but if we had interoperability,  
21 maybe you could use his tower; and I just want to  
22 leave that as a possible thought as we move forward  
23 in the panel.

24                   MS. VICTORY: I have one quick  
25 question. I don't remember which of the panelists

□

1 mentioned this, but one of you did mention that  
2 there were elements that significantly contributed  
3 to survivability, but did not identify what those  
4 elements were.

5                   And just very quickly, I was wondering  
6 if you could do that for the panel.

7                   DR. VAUGHAN: It was I who said it.  
8 Some of the things that we're thinking about is --  
9 and Mr. Tusa mentioned at least a couple --  
10 obviously, the notion of -- at least they're rated  
11 for 150 mile-an-hour winds for both the tower and  
12 the shelter.

13                   The use of systems where you have

14 single points of failure such as uninterruptible  
15 power systems are not a good idea. Placing all  
16 electronics well above the 100-year flood plane is  
17 also an excellent idea. Back-up systems that  
18 include both batteries and generators as we heard  
19 about today are also suggestions. And predesign --  
20 and we heard some of this today -- predesign  
21 fall-back modes that are -- graceful, I guess, was  
22 the word -- graceful failures are extremely  
23 important.

24                   So protecting the electronics and  
25 protecting the infrastructure from the elements and

□

1 protecting the connectivity to the greatest extent  
2 possible -- and one notion there is -- and Mr. Tusa  
3 mentioned that -- is using microwaves; that is,  
4 using wireless -- let me put it that way -- to make  
5 connections because the trees can't fall on them.

6                   MS. VICTORY: Thank you very much. I  
7 want to thank all of our speakers this afternoon.  
8 I very much appreciate you coming out and sharing  
9 your thoughts to us, and, again, thank you to my  
10 fellow panel members.

11                   We are going to reconvene tomorrow  
12 morning at 9:30 right here. See you bright and  
13 early. Thank you.

14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

(HEARING WAS DISMISSED AT 5:00 p.m. AND WILL  
RECONVENE AT 9:30 a.m. ON MARCH 7, 2006)

□

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14

Panel 4

Call to Order and Opening Remarks

Nancy Victory, Chair of the Independent

Panel

welcome to the second day of the Hurricane  
Katrina Panel. We had a fabulous day yesterday,  
three terrific groups of speakers, lots of good  
questions for the panel members, and, really, a  
number of us were discussing this last night, that  
it was a really very good educational experience  
for the folks on the panel because we heard lots of  
good ideas and lots of expertise and experiences

15 from our speakers; and we expect more of the same  
16 today.

17 So we have a full agenda this morning, and we  
18 are going to try to get done by lunchtime today.

19 So without further ado, I'm going to introduce  
20 the first panel. Just like yesterday, we are going  
21 to follow the same format. We will be hearing from  
22 all of the speakers within each group. Then the  
23 panel members will have an opportunity to ask  
24 questions of our group of speakers, and we are  
25 going to be trying to limit the presentations to

□

1 approximately no more than ten minutes each; and  
2 you will see some lights up here to guide you on  
3 the timing as you are going through your  
4 presentations.

5 But we look forward to hearing from this group,  
6 and let me go ahead and introduce them all first.  
7 We will start with Cheryl Heppner, Vice Chair, Deaf  
8 and Hard of Hearing Consumer Advocacy Network;  
9 Hilary Styron, Director, Emergency Preparedness  
10 Initiative, National Organization on Disability;  
11 Pat Roberts, the President of the Florida  
12 Association of Broadcasters; Dave Vincent, Station  
13 Manager, WLOX-TV, representing the Mississippi  
14 Association of Broadcasters; John Archer, Vice

15 President, Operations of XM Satellite Radio, Inc.;

16 Sara Allen, Ciara Enterprises, Inc., representing

17 the Prometheus Radio Project; and, finally, Marie

18 Antoon, Mississippi Public Broadcasting.

19 We look forward to hearing from this entire

20 group, and if I could start with Ms. Heppner.

21

22 CHERYL HEPPNER, VICE CHAIR

23 DEAF AND HARD OF HEARING CONSUMER ADVOCACY NETWORK

24

25 Thank you. I must explain that I have not heard

□

1 myself speak since I lost my hearing, which was 16

2 years ago. So, please, let me know if I'm speaking

3 too loud or too softly, a simple louder or lower.

4 Thank you.

5 I am Cheryl Heppner. I represent the Deaf and

6 Hard of Hearing Consumer Advocacy Network, a

7 coalition of 16 non-profit organizations of, by,

8 and for deaf and hard of hearing, late-deafened and

9 deaf-blind individuals.

10 As I go through my presentation, I will be using

11 the terms hearing loss and deaf and hard of hearing

12 to represent all in the interest of saving time.

13 We thank Ms. Victory and the panel for the

14 opportunity to make this presentation today.

15 There are 31 million Americans with hearing

16 loss. The number is rising dramatically with the  
17 aging of baby-boomers and is expected to reach 78  
18 million by 2030.

19 Hearing aids and cochlear implants can help, but  
20 studies show only one out of four people who need a  
21 hearing aid are using one, that the average person  
22 with hearing loss waits seven years to get help;  
23 they do not restore hearing to normal; and most  
24 people have only one, which means that they have  
25 difficulty locating sound.

□

1 People with hearing loss use many strategies and  
2 tools for communication. Katrina stressed those  
3 strategies and took away many tools. For example,  
4 Katrina brought humidity, heavy rain, flooding, and  
5 high temperatures, which translates into  
6 perspiration. All of these are enemies of hearing  
7 aids and cochlear implants because moisture can  
8 invade their circuitry. As a result, some people  
9 became heavily dependent on visual information.

10 Katrina also caused widespread power outages and  
11 the loss of telecommunications, which made it  
12 difficult or impossible to reach the professionals  
13 who provide visual information through  
14 interpreting, transliteration, and the translation  
15 of spoken words to text.

16 Katrina also cut off people who were deaf-blind  
17 from their support service providers who facilitate  
18 communications, provide visual and auditory  
19 information, and act as their sighted guides.

20 At the first meeting, this panel heard from  
21 numerous presenters whose companies, agencies, and  
22 organizations planned carefully for Katrina. Their  
23 work in retaining and restoring communications was  
24 heroic, and we thank them. We also thank the FCC  
25 for its dedicated work to support them and its

□

1 unprecedented effort to assist the disability  
2 community in the aftermath of Katrina. Despite  
3 these efforts, people with hearing loss encountered  
4 many difficulties. To name just a few:

5 First, television -- when alerted to a potential  
6 emergency, people with hearing loss tend to turn on  
7 their television to get more information. Many  
8 television stations did not provide visual  
9 information or provided insufficient information to  
10 convey the gravity of the situation and what  
11 actions should be taken.

12 FCC regulations requiring this information have  
13 been in effect for years, and the FCC has sent  
14 broadcasters several reminders of their  
15 obligations. On September 9, 2005, prompted by  
16 Katrina-related complaints from consumers, the FCC

17 issued yet another reminder.  
18 Deaf and hard of hearing consumers were  
19 frustrated because they could turn on their  
20 television sets. They could see national  
21 broadcasts with closed captioning which gave them  
22 information with a broad picture, but they could  
23 not find out what was happening in their own  
24 community through local newscasts. Here in  
25 Mississippi, they weren't given important

□

1 information such as the need to boil or treat  
2 water, and in Lafayette, Louisiana, there were  
3 times when the only visual information a local TV  
4 station provided was scrolling captions that have  
5 phone numbers or a list of roads that were closed.  
6 Details that other people are getting are  
7 important as well. What resources will someone get  
8 by calling these phone numbers, and what hours are  
9 the networks in operation? What exact sections of  
10 roads are closed? What are alternate routes? What  
11 is the anticipated length of the closures?  
12 Second, radio -- with power and  
13 telecommunications outages, at times the one  
14 reliable source of information was a good  
15 battery-operated radio. Yet these radios are  
16 useless to people who have more than a mild to

17 moderate hearing loss.

18 Third, telecommunications -- portable and  
19 temporary cell towers became crucial to  
20 resurrection of the telecommunications network, but  
21 power sources remained problematic. Many of the  
22 devices used by deaf and hard of hearing  
23 individuals such as touch telephones or powerful  
24 amplified phones cannot be operated with  
25 off-the-shelf batteries.

□

1 Telecommunications relay services allow people  
2 with hearing loss to make calls to and receive  
3 calls from standard telephone users by receiving  
4 the audio portion through text or sign language.  
5 In Louisiana and in Mississippi, even when phone  
6 service was available, the phone numbers for relay  
7 users would not work for several days. This was a  
8 major concern for people who wanted to contact  
9 their friends and families to reassure them of  
10 their safety and inform them of their whereabouts.

11 In addition, a number of relay service providers  
12 struggled to get permission to be able to install  
13 free equipment in shelters so that people who were  
14 deaf and hard of hearing would have the same  
15 ability to make calls there as others.

16 where cell towers existed, there was a need for  
17 wireless text devices or computers to access relay

18 services.

19 I would like to say a bit about the experience  
20 of Barbara White and Alexis Greeves. These two  
21 individuals were deployed by Gallaudet University  
22 in Washington, DC, to Houston on September 18,  
23 2005. Three days later, Barbara was driving with  
24 Alexis and 11 others individuals who were  
25 evacuating that had been sent from New Orleans, and

□

1 they were heading to Austin, trying to escape from  
2 Rita.

3 Because they couldn't make any use of the car  
4 radio, they did not have any access to  
5 announcements, announcements with information about  
6 driving routes. They had no information about the  
7 progress of the storm. This made it impossible for  
8 Barbara to be able to determine the safety of the  
9 group.

10 The one tool that Barbara had was a pager. It  
11 brought her emergency alerts from the Houston area  
12 which gave the frightening news that Rita was a  
13 Category 5 storm.

14 The drive, which normally takes two hours, took  
15 them fifteen. Pager reception was nonexistent in  
16 many of the towns they passed, but it could be used  
17 in others. Barbara was able to use her pager to

18 connect with her husband who lived in Maryland.  
19 Her husband was able to use Barbara's information  
20 to go to the Internet, check Map Quest, find the  
21 driving route, where they needed to go, and send  
22 them back to her pager. Eventually, the group  
23 safely arrived in Austin.  
24 Our coalition continues to work on a detailed  
25 Katrina report which will include recommendations

□

1 that build upon our national report about  
2 experiences during 9-11 and its aftermath. It was  
3 released in December 2004.  
4 The report gave the nation's emergency  
5 communication system a failing grade and listed  
6 building an effective system as one of its two top  
7 priorities. Among the communication system  
8 recommendation that were reinforced by Katrina  
9 experiences are: The critical need for additional  
10 redundancy to ensure effective communication during  
11 preparation, notification, response, and recovery;  
12 the need to develop a visually accessible  
13 communication system that can operate with  
14 off-the-shelf batteries, such as a text radio; the  
15 need to better equip shelters and train providers  
16 to ensure effective communication with deaf and  
17 hard of hearing evacuees.  
18 Katrina was also a powerful lesson about the

19 second top priority, the building of a national  
20 network that will actively involve and integrate  
21 individuals who are deaf and hard of hearing in  
22 such things emergency planning at all levels,  
23 equipment testing, disaster exercises, training of  
24 public safety and security personnel, and volunteer  
25 work with such organizations as the Red Cross and

□

1 Citizen Corps.

2 The massive scale of relief efforts for Katrina  
3 has highlighted the importance of community-based  
4 organizations. Deaf and hard of hearing persons  
5 impacted by Katrina in particular owe a tremendous  
6 debt to churches with deaf ministries, schools of  
7 the deaf, and agencies and organizations dedicated  
8 to serving deaf and hard of hearing people. Many  
9 continue to be crucial to recovery efforts.

10 Additional information is available in the  
11 report, "Emergency Preparedness and Emergency  
12 Communication Access: Lessons Learned Since 9-11  
13 and Recommendations." And your written handout has  
14 a copy of the web site link to this report. Thank  
15 you very much.

16

17 Nancy J. Victory, Chair of the Independent Panel

18 Thank you. Ms. Styron.

19

20 Hilary Styron, Director, Emergency Preparedness  
21 Initiative, National Organization on Disability

22

23 Good morning. My name is Hilary Styron, and I'm  
24 the director of the National Organization on  
25 Disability's Emergency Preparedness Initiative. I

□

1 would like to thank FCC Chairman Martin for  
2 convening the investigation panel on a topic that  
3 is critical to the life safety and health of 54  
4 million men, women, and children with disabilities  
5 in the United States, but more specifically, I  
6 would like to thank the 945,000 individuals with  
7 disabilities in Alabama, the 880,000 individuals in  
8 Louisiana, and 607,000 individuals with  
9 disabilities in Mississippi who were directly or  
10 indirectly impacted by Katrina. I would also like  
11 to thank the Panel Chairwoman, Ms. Victory, and the  
12 panel members for holding today's meeting and  
13 hearing comments from representatives from the  
14 disability community.

15 At the January 30th meeting of this  
16 investigation panel, you heard remarks from  
17 telecommunications providers, first responder  
18 agencies and their experiences from Hurricane  
19 Katrina and the impact on the communication

20 infrastructure, media access, and interoperable  
21 communications between responders and rescue  
22 agencies. This morning my remarks on those same  
23 issues are to remind you of a population that  
24 relies on communication technology just as much as  
25 responders, but this time, in terms of their own

□

1 life safety, their ability to have early warning  
2 and alert notification, and their ability to  
3 understand the severity of the emergency and  
4 actions required of them.

5 Hurricane Katrina impacted all populations.  
6 770,000 plus people were displaced, and according  
7 to the recently released Federal Response/Lessons  
8 Learned report from the White House, many of the  
9 1,330 victims were elderly or infirm, 71 percent of  
10 those victims were over age 60, and at least 68  
11 victims were found in nursing homes.

12 U.S. Census reports from year 2000 indicate that  
13 in each of the hardest hit areas, nearly 25 percent  
14 of their populations were classified as having a  
15 disability. In New Orleans alone, over 23,000  
16 people have a sensory disability that may require  
17 additional assistive technology for everyday  
18 communications, and this need only increases during  
19 emergencies.

20 In other words, the destruction of the physical  
21 environment and communications system caused by  
22 Hurricane Katrina had implications to thousands of  
23 people with disabilities who lived along the Gulf  
24 Coast. For example, people who were deaf or hard  
25 of hearing were challenged to access emergency

□

1 information through television, radio, or TTY due  
2 to damage, but also due to lack of accessible  
3 information being provided by broadcasters.

4 If individuals were able to reach a shelter,  
5 they were met with inaccessible facilities and  
6 technology. During Hurricane Katrina, my program  
7 deployed four special needs assessment teams into  
8 the region and determined that over 80 percent of  
9 the shelters did not have access to TTY  
10 communications. However, vendor telephone banks  
11 stood up mobile telephone units all over the region  
12 without TTY or Video Relay Service for American  
13 Sign Language users. Over 60 percent of the  
14 shelters did not have captioning capabilities  
15 utilized on the television screen, and several  
16 broadcasters did not caption their emergency  
17 information, which is required by FCC regulations.

18 The FCC indicated that consumer information for  
19 emergency communications during Hurricane Katrina  
20 included three components: One, the 911 system

21 through public service answer points. However,  
22 over 38 of those systems collapsed and are being  
23 rebuilt to this day.

24 The emergency alert system where all EAS alerts  
25 should be accessible by audio and visual means or

□

1 simple visual means, including closed captioning,  
2 open captioning, crawls or scrolls was not  
3 activated by officials, thereby not impressing the  
4 extreme emergency to all people or conveying  
5 information to the population.

6 And, third, radio and/or broadcast or cable  
7 television station news and updates of which must  
8 be made accessible in order to be effective.

9 If the very options for emergency communications  
10 recognized by the FCC for Hurricane Katrina were  
11 not activated, were destroyed, or simply not  
12 implemented, then there are no communications or  
13 options for a population in desperate need,  
14 including those without disabilities.

15 People with disabilities may need additional  
16 preparation time to respond to an emergency. Early  
17 warning and accessible warnings are key.  
18 Transportation coordination for evacuation must be  
19 known in advance and communicated over several  
20 modalities during the event.

21 Individuals who are blind or low vision need  
22 time to coordinate movement into an unknown  
23 environment. People living in congregate care  
24 settings and those with cognitive disabilities may  
25 rely on others to help them during emergency

□

1 evaluations, and coordination of this effort takes  
2 time.

3 Care providers and people with disabilities  
4 themselves must be able to access information if we  
5 as emergency managers expect our citizens to  
6 prepare or evacuate themselves.

7 Television stations may assert that they are  
8 doing their best just to stay on the air. That is  
9 true, but they must get over the notion that  
10 helping most of the people is good enough when it's  
11 the law that they make information available to all  
12 people.

13 A television station in Southern Mississippi had  
14 a sign language interpreter on the screen during  
15 weather announcements, but there was no captioning  
16 of what the reporter was actually saying. If one  
17 was hearing impaired and did not know sign  
18 language, they would not have had emergency  
19 information.

20 while the station did have information on where  
21 to go and what to do scrolled across the screen,

22 additional information coming from the reporter was  
23 not captioned or signed, and the deaf and hard of  
24 hearing population quite possibly could not gather  
25 life-saving information.

□

1 Even with 47 CFR 79.2 requiring that any  
2 information intended to further the protection of  
3 life, health, safety, or property such as immediate  
4 weather situations, evacuation orders, relief  
5 assistance include those critical details about  
6 emergencies and be provided in a visual format such  
7 as open caption, scrolls, or even hand lettered  
8 signs for the accessibility to people with  
9 disabilities and requiring those rules apply to all  
10 local broadcasters and cable operators or satellite  
11 TV providers, there seems to be a barrier in  
12 compliance with this regulation in that TV stations  
13 have had the discretion to determine what  
14 constituted an emergency.

15 Perhaps if the emergency alert system had been  
16 activated, even television broadcasters would have  
17 recognized the pending onslaught of Katrina to be  
18 massive and truly an emergency and not taken the  
19 latitude to make their broadcast accessible.

20 One way to address this problem is at the very  
21 least when a Presidential declaration of disaster

22 has been made, everything given verbally about that  
23 event must be made accessible visually for persons  
24 with hearing disabilities. And if maps or written  
25 or visual materials are referred to, then it must

□

1 be explained verbally so that persons with visual  
2 disabilities have access to that information. The  
3 critical details must be provided in an  
4 oral format.

5 Additional solutions to these communications  
6 problems are already used by the Enforcement Bureau  
7 of the FCC and perhaps should be integrated into  
8 general practice by the broadcast industry across  
9 the board and without delay, before, during, and  
10 after emergencies.

11 Stations should commence captioning or contact  
12 its captioning service promptly before or  
13 contemporaneously with any broadcast coverage or a  
14 pending or imminent emergency that endangers the  
15 station's principal coverage area and make its best  
16 reasonable efforts to ensure that coverage of the  
17 emergency is captioned as soon as possible.

18 Stations should maintain visible postings on  
19 television sets in the newsroom that remind  
20 employees to contact the station's captioning  
21 service during emergency events and include phone  
22 numbers for that service.

23 Stations should maintain a labeled speed dial  
24 button on telephones in the newsroom with direct  
25 connection to the station's captioning service.

□

1 Stations should provide special weather text  
2 graphics to hearing-impaired viewers with  
3 shelter-at-home tips during coverage of tornado,  
4 severe thunderstorm, flash flooding, or other  
5 weather emergencies.

6 Stations must adopt an emergency visual  
7 presentation policy requiring that all emergency  
8 information broadcast outside a regularly scheduled  
9 newscast be accompanied by captioning of emergency  
10 information as it is conveyed via the station's  
11 audio.

12 Information should include a clear text graphic  
13 or text crawl, and emergency information that  
14 includes any information relating to an imminent or  
15 on-going emergency affecting the broadcast coverage  
16 area and that is intended to protect the life,  
17 health, and safety must be accessible at all times.

18 Stations should distribute at least every six  
19 months the station's emergency visual presentation  
20 policy to all employees and incorporate this policy  
21 into a station's annual news employee training  
22 orientation.

23 vendors in the telecommunications industry must  
24 recognize that their customer base includes people  
25 with disabilities and provide access to

□

1 communications to these individuals as well. No  
2 longer should a cellular phone service be permitted  
3 to stage telephone banks at a federally funded  
4 shelter site unless there is also access to TTY and  
5 Video Relay Service technology.

6 Vendors should also seek to assist shelter  
7 operators, national government organizations, and  
8 voluntary agencies in stockpiling assistive  
9 technology devices to make them readily available  
10 during emergencies for those emergency shelter  
11 operations and restoration of the communities that  
12 are impacted.

13 As the communication and broadcast industry  
14 rebuild infrastructure from Hurricane Katrina, they  
15 must also rebuild their policies and procedures  
16 that impact the public they serve. The problems  
17 brought to bear by Katrina illustrate the  
18 importance of establishing regulations that  
19 guarantee a robust communications infrastructure in  
20 times of duress and, equally important, a distinct  
21 plan of action for authorities to follow in case of  
22 a national emergency.

23 Communication is a basic need of all people.

24 All people should have access to emergency  
25 information, including those with disabilities.

□

1 Thank you.

2

3 Nancy J. Victory, Chair of the Independent Panel

4 Thank you very much. Mr. Roberts.

5

6 Pat Roberts, President

7 Florida Association of Broadcasters

8

9 Good morning, Madam Chairman and members of the  
10 panel.

11 I'm C. Patrick Roberts, President of the Florida  
12 Association of Broadcasters. I also serve as the  
13 Florida Chairman of the Federal Communications  
14 Commission State Emergency Communication Committee.

15 I thank you for allowing me to be with you today  
16 and offer my perspective on hurricane warnings and  
17 preparedness.

18 I have provided y'all a copy of the materials I  
19 gave to the U.S. Commerce Committee as well as  
20 DVD's that cover the public service announcements  
21 we've done in Florida since Andrew for the last 12  
22 years. Also, it has a DVD on EAS that Craig Fugate  
23 did. It has a story of Florida responding to

24 Katrina and coming and helping our neighbors under  
25 EMAC and one final one that talks about the

□

1 experiences of Florida in 2004; and those were all  
2 included in the back of the packet here.

3 Let me begin by briefly sharing my experience in  
4 the field of emergency management for the last 18  
5 years. I've served on the state response team  
6 since before Hurricane Andrew hit our state, and in  
7 our state, broadcasters are considered first  
8 responders.

9 Back in 1992, I was at our Emergency Operations  
10 Center three days before Hurricane Andrew hit our  
11 state, and along with Governor Chiles, arrived in  
12 Homestead that afternoon. I've been to every  
13 hurricane Florida has had since Andrew, and last  
14 year I was in Biloxi the day after Katrina came  
15 through.

16 Hurricane Andrew taught our state, Florida, that  
17 Local and State Government need to be better  
18 prepared to respond to these types of disasters.  
19 Andrew taught us that preparedness is the  
20 responsibility of both the public and the private  
21 sector.

22 As a result, for the past 13 years, Florida has  
23 invested in training people, utilizing the latest  
24 technology, and with the partnership with the

25 Florida Association of Broadcasters implementing

□

1 public disaster preparedness education programs for  
2 the public.

3 Today the Florida Broadcasters are considered  
4 first responders. Local radio and TV are the  
5 lifeline to the residents in the local community.  
6 Those efforts have not been limited solely to  
7 hurricanes. Florida takes an all-hazardous  
8 approach to preparedness and response, and those  
9 include hurricanes, wild fires, floods, tornadoes,  
10 and potential terrorist attacks.

11 with the emphasis on preparedness and response  
12 that Florida has had over the past 13 years, our  
13 State and Local Government and our residents could  
14 not have gotten through the numerous hurricanes  
15 that have hit our state the past two years. We  
16 truly play as we practice.

17 I think many of the lessons we've learned in  
18 Florida and Alabama, Mississippi, Louisiana, and  
19 even Texas are valuable and applicable to the whole  
20 country. I would like to take a few moments to  
21 share some of those with this panel.

22 First, America must have a more comprehensive  
23 and cohesive program among the State, Federal, and  
24 Local Governments and our citizens to prepare for

25 natural disasters and terrorists.

□

1 The public expects a unified command from the  
2 city hall to the state house and to the white  
3 House. That means more training, more exercise,  
4 and utilizing the latest training technology.

5 It also means our states and our counties need  
6 to have a state-of-the-art emergency operations  
7 center. We need to unify a national emergency  
8 alert system for the immediate warning that allows  
9 the President or Governor the ability to activate a  
10 county, a state, or a multi-state region, or the  
11 whole nation.

12 Currently, the EAS system is most often used for  
13 AMBER alerts to help communities find missing  
14 children. I highly recommend that we end up with a  
15 federally funded state-based EAS system in a  
16 partnership between the FCC, NOAA, and Homeland  
17 Security.

18 Today, the only way the President of the United  
19 States can speak to the nation through EAS is by  
20 utilizing the National Weather Service.

21 Just as a side note, if you're not aware that on  
22 9-11, if the President had tried to activate an EAS  
23 system, there was no means for him to do that in  
24 this country. Now they have set it up to go  
25 through the weather service, and it will work.

□

1 The Florida Association of Broadcasters, in  
2 partnership with our Florida Division of Emergency  
3 Management, has developed a comprehensive hurricane  
4 preparedness campaign. This has helped our  
5 residents prepare for hurricanes as they approach  
6 Florida. We produce and air public service  
7 announcements for both TV and radio. We produce  
8 them in both English and Spanish, and we do closed  
9 captioning for television.

10 Broadcasters provide public education at the  
11 start of every hurricane season, and we add new  
12 messages based on our experience. A few examples  
13 are evacuation zones. During Hurricane Floyd, we  
14 evacuated way too many people when we sent the  
15 entire East Coast on I-95.

16 So we learned. We came back and explained  
17 evacuation zones. The next year, we didn't have  
18 that problem.

19 We've learned over the last years to address  
20 special needs group. In addition to some that you  
21 have heard about today, Florida has now added  
22 people in the inner city who have no transportation  
23 as a special needs. Elderly that live in high rise  
24 buildings, if there is no power, they have no way  
25 to go up or down or get food and water.

□

1       So we are addressing that need.

2       How many days of prescription drugs do you need?

3       What do you do with your pets?

4       So we now actually for the first time this year  
5       had pet-friendly shelters in Florida, which was a  
6       first for this nation.

7       During the actual hurricane, broadcasters  
8       provide valuable information to the local residents  
9       of the impacted area. In most cases, it's the  
10      radio stations, with the help of the local  
11      television news operations, that are able to get  
12      the information out.

13      Because of their roles during disasters,  
14      broadcasters also need to have a priority status  
15      when it comes to fuel. Over the past few years,  
16      there have been a number of instances where both  
17      radio and television stations were close to going  
18      off the air because they were running out of fuel  
19      for their generators.

20      In Florida, local television and radio are  
21      considered priority on the priority fuel list right  
22      behind health care and public safety. Local,  
23      state, and federal emergency plans need to include  
24      broadcast stations in their priority fuel  
25      allocation plans.

□

1       During 2004, for the first time in any  
2 hurricane, we activated EAS in Florida before two  
3 of them made landfall. That led me to share the  
4 same experiences with Alabama, Mississippi,  
5 Louisiana, and later Texas with Hurricane Rita and  
6 let them know what they needed to be prepared for.  
7 It is my understanding EAS was activated on a  
8 limited basis by the National Weather Service  
9 during Katrina, but under the tornado code or  
10 severe code, not a hurricane code or a special  
11 prepared message.

12       In 2004, Clear Channel stations in Punta Gorda  
13 lost over half of its building, but stayed on the  
14 air throughout the storm. Last September, the day  
15 after the storm, as a result of Hurricane Katrina,  
16 WLOX-TV in Biloxi lost a large portion of its  
17 building, but it never went off the air; and they  
18 never stopped broadcasting the vital information to  
19 their communities.

20       Several of the local Southern Mississippi radio  
21 stations simulcast WLOX to the residents of their  
22 communities working hand in hand. Broadcasters,  
23 along with the police, the fire fighters, emergency  
24 management, public safety officials, electric  
25 utilities, phone providers are on the front line as

□

1 the nation's first responders.

2 Local broadcasters are proud of the role that  
3 they have played in their communities and are  
4 diligent in alerting and warning people, especially  
5 to get them out of harm's way.

6 I want to thank the FCC Chairman's office. When  
7 we contacted them prior to Katrina, they were  
8 extremely helpful, extremely responsive in not only  
9 Florida, but our sister states on the Gulf Coast.  
10 They told us how and approved, if there needed to  
11 be power increased, they authorized any type of  
12 activity we need to do to get them fuel.

13 For some of you, you have heard that I called  
14 Kathleen and talked to her, and in order to get  
15 people in from other states to help Mississippi and  
16 Louisiana, we actually, with approval, kind of in  
17 the latter days, we actually had a state emergency  
18 communications hurricane disaster team prepared and  
19 sent to the Mississippi, Louisiana, and Texas to  
20 help move people between state lines to assist  
21 other stations. The Chairman's office was  
22 extremely responsive during this time.

23 As I said earlier, I have enclosed a copy of the  
24 material I provided the Senate.

25 Just one closing comment because I do know

□

1 closed captioning continues to come up in a lot of  
2 these meetings. I think almost every broadcaster  
3 takes their job responsibly, and they want to close  
4 caption. They have captioning services, but when  
5 they run into difficulties, I think we need to have  
6 -- I would hope this group, this panel, would  
7 recommend a task force sit down between the  
8 broadcasters and the disability group and work out  
9 an understanding.

10 For a station down in Fort Myers to have to pay  
11 tremendous legal fees, to have to spend an enormous  
12 amount of time when a very few minutes in a  
13 seven-day week of emergency communication was not  
14 closed captioned by their service. To be  
15 substantially fined and spend probably a quarter of  
16 a million dollars in legal fees, to me, is not a  
17 win for anybody. It's a loss for everybody.

18 If that station had broadcast its regular,  
19 normal programming fed to them by the network or  
20 syndicators, they would not have been fined. The  
21 example that upset me the most was when they heard  
22 from the emergency county office they were going to  
23 close the bridge from Sanibel Island and they were  
24 going to close it in 30 minutes and their  
25 captioning service was out of kilter, they had a

□

1 decision, tell everybody that had no disability  
2 that the bridge was going to close and be fined or  
3 tell nobody and not be fined. They chose to tell  
4 the people while they waited for their captioning  
5 service to come back up.

6 So I would hope that we, along with the hearing  
7 impaired, the disability, can work out a way to  
8 have an on-going working relationship between the  
9 broadcasters and that community so we can all serve  
10 the entire population.

11 Thank you, and I will be glad to take questions  
12 at the end of the panel.

13 MS. VICTORY: Thank you very much.

14 Mr. Vincent.

15

16 Dave Vincent, Station Manager WLOX-TV  
17 Representing Mississippi Association of  
18 Broadcasters

19 Good morning, Madam Chairman of the Panel. I'm  
20 Dave Vincent. I'm the station manager and the news  
21 director of WLOX in Biloxi, Mississippi. I'm also  
22 here today representing the Mississippi  
23 Broadcasters Association.

24 As we all know, Hurricane Katrina on August 29,  
25 2005, was said to be the worst national disaster in

□

1 our country's history. If you look at the  
2 devastation in our state and the neighboring  
3 states, we all can agree, I think, with that  
4 statement.

5 When most residents of America hear about  
6 Mississippi, we think of a rural state with not  
7 much of a population base. However, the population  
8 of the Mississippi Gulf Coast is close to the  
9 population, really, of the City of New Orleans.  
10 The 2003 census information put the population  
11 along the Mississippi Gulf Coast at 411,000 people.  
12 Currently, the population of the City of New  
13 Orleans is slightly more than 484,000.

14 While the Mississippi Gulf Coast has not gotten  
15 the media attention of New Orleans, I think the  
16 numbers show that we do have a large population  
17 base, which has a great need to be informed prior  
18 to and after a major catastrophe.

19 You will be glad to hear that the Mississippi  
20 broadcasters, both television and radio, did an  
21 outstanding job. In several cases, the Mississippi  
22 broadcasters put their lives on the line in order  
23 to make sure that the viewing and listening public  
24 had the necessary information to weather the storm.

25 There were some problems that I would like to

□

1 address today for you and others to consider, and I  
2 will do that after I tell you a few stories about  
3 what Mississippi broadcasters do or did during the  
4 storm.

5 At our own station, WLOX, in Biloxi, we started  
6 our around-the-clock coverage on Sunday morning.  
7 The coverage lasted for 12 straight days. We never  
8 went off the air except for a few hours a week  
9 after the storm when a water heater blew up on our  
10 generator in McHenry, Mississippi.

11 Then we were able to partner with WXXV, a Fox  
12 affiliate in Gulfport, Mississippi, which carried  
13 our signal until we could get back on the air. I  
14 am proud of the media on the Mississippi Gulf  
15 Coast. Four radio groups, WLOX, and the Sun  
16 Herald, the local newspaper, joined forces in  
17 providing information to the public. The four  
18 media groups, Triad, Gulf Coast Radio Group, Clear  
19 Channel, and WOSM all joined forces in carrying the  
20 news product of WLOX.

21 By using the news from the television station  
22 and the signal of four radio stations, we were able  
23 to keep the Mississippi Gulf Coast informed on  
24 emergency messages residents needed to hear before  
25 and after the storm.

□

1 We received many letters and calls following the  
2 storm saying that if they had not been able to  
3 receive our signal during the storm, they do not  
4 believe they would have been able to make it  
5 through.

6 At WLOX, we experienced major damage from  
7 Hurricane Katrina. We lost our sales office when a  
8 tower fell pulling a guy point out of the ground  
9 and tossing a ten-ton pound piece of concrete on  
10 top of our building. Thank goodness, no one was in  
11 that part of the building as they surely would have  
12 been seriously injured.

13 During the height of the storm, the roof over  
14 our newsroom pulled away. We had to quickly move  
15 computers and other valuable equipment while we  
16 were still on the air. While our newsroom still  
17 had walls, it was not usable during and following  
18 the storm because of falling sheetrock and ceiling  
19 tiles.

20 As of today, we're still in a makeshift  
21 newsroom. We hope to finish repairs by May of this  
22 year.

23 After our newsroom was damaged, we all evacuated  
24 to a hallway where we kept broadcasting the latest  
25 radar maps and still took calls from our viewers as

□

1 long as we could. We operated for several hours  
2 out of this hallway.

3 About 3:00 Monday afternoon, we moved back to  
4 our main studio even though the adjoining newsroom  
5 lacked a roof and winds were still howling through  
6 our newsroom and, also, you could hear it on the  
7 air. During the next two weeks, our staff did a  
8 remarkable job. Working 12-hour shifts, our 50  
9 employees who were at the station at the time kept  
10 broadcasting on our air waves and also to our radio  
11 partners.

12 Also, our parent company at the time, Liberty  
13 Broadcasting Company, did a tremendous job in  
14 bringing in supplies on Tuesday morning to make  
15 sure we were able to continue broadcasting. The  
16 airport was still closed, but they were able to  
17 bring a plane in and land by noon on Tuesday  
18 morning.

19 While we were struggling to keep operations  
20 going at our broadcast facility, our bureau  
21 reporters in Hancock and Jackson Counties were  
22 experiencing an even tougher time. Al Showers was  
23 at the EOC Center in Bay St. Louis. The water got  
24 so high outside the EOC Center that the employees  
25 at the emergency center wrote numbers on their own

1 arms and put the numbers and names up high in the  
2 building in case they did not make it.

3 Our bureau in Bay St. Louis was completely  
4 destroyed. We lost a car, editing equipment,  
5 transmitting equipment. The only thing we saved  
6 was a camera, which Al had with him at the time.

7 In Pascagoula, we suffered a similar fate. We  
8 lost a car, which was parked outside the EOC Center  
9 when the storm surge came ashore.

10 WRJW in Picayune, Mississippi, went off the air  
11 for several hours after the hurricane force winds  
12 raked Pearl River County. However, having a  
13 standing tower after the storm, they were  
14 determined to get back on the air as soon as  
15 possible. They borrowed a generator from the  
16 manager of the radio station and were able to get  
17 back on the air by Tuesday night.

18 Fuel became a big problem for them as there were  
19 no service stations operating. They literally  
20 drained the gas from their station van to keep  
21 their generator running for ten hours.

22 The station had to go to Kentucky to find a  
23 larger generator and adequate fuel to run that  
24 generator. The station was the lifeblood of  
25 information for the Picayune area.

1 The parking lot was full of folks needing to get  
2 information out. They included local police,  
3 county sheriff's department, emergency management  
4 personnel, FEMA, Red Cross, and other emergency  
5 management personnel.

6 The manager of the radio station said if it had  
7 been for gasoline they begged from listeners, they  
8 would have been off the air in less than 24 hours.  
9 Delores Wood, the manager of the station, told the  
10 State Broadcasters Association that these  
11 incredible experiences should point out the  
12 importance of hometown radio stations and their  
13 need during a crisis.

14 In Jackson, our Capitol city, all three  
15 television stations were able to continue  
16 broadcasting with back-up generators. WLBT, the  
17 NBC affiliate in Jackson, used its helicopter to  
18 provide the first aerial look at the damaged area.  
19 WLBT also used its helicopter to fly medical and  
20 other supplies to hard to get to areas.

21 Other radio and television stations in  
22 Mississippi were also there for their communities.  
23 Some lost power for a few hours or even days, but  
24 as soon as they could get back on the air, they  
25 did, and let the public know what was happening in

1 their communities.

2 Some radio stations were able to operate only at  
3 half power because of the problem of obtaining  
4 enough fuel to run the generators to fuel those  
5 transmitters.

6 I think you can see Mississippi broadcasters  
7 rose to the challenge. No doubt it was the biggest  
8 challenge they have ever faced in their  
9 broadcasting career.

10 Now let me talk about a few things that could  
11 have gone better for our state broadcasters. Fuel  
12 was no doubt the biggest problem facing the state  
13 broadcasters. Along the Coast, MDOT attempted to  
14 confiscate fuel both from WXXV and WLOX. Our  
15 station had brought fuel in from Lake Charles,  
16 Louisiana. We had filled up our generator at the  
17 station, and we had also shared some with the  
18 newspaper, the Sun Herald, across the street from  
19 us.

20 There was still 1,000 gallons left in the tanker  
21 truck. Our management decided to ask the EOC  
22 director where we could take it to help the County  
23 out.

24 He said, "Take it to the county barn."

25 We were on our way out there when an MDOT

1 stopped our truck and ordered it to go to the same  
2 place we were taking it.

3 Jackie Lett, the Executive Director of the  
4 Mississippi Broadcasters, helped to arrange a fuel  
5 truck to come in and provide diesel fuel for WXXV.  
6 However, that tanker was only able to off load  
7 1,000 of 3,000 gallons on the truck before it was  
8 confiscated.

9 Another fuel run was attempted, but, once again,  
10 the tanker was confiscated.

11 So fuel never was delivered to XXV. Now, this  
12 was fuel that was -- the individual stations had  
13 gone out on the open market, and we had purchased  
14 in order to keep our generators running. It was  
15 not fuel being supplied by a state or federal  
16 agency.

17 I hope you all agree that broadcasters are first  
18 responders, and we are just as entitled to our own  
19 fuel as other responders such as the highway  
20 patrol, sheriff officials, or city police. Without  
21 this fuel, there is no way the public will ever  
22 know what is going on.

23 Broadcasters must be recognized as first  
24 responders in subsequent disasters or  
25 communications is going to come to a stand still

□

1 and the public will be harmed because they did not

2 receive the vital information.

3 whether this is a state or federal issue is  
4 really immaterial to us broadcasters. I hope if  
5 anything comes out of these hearings is that the  
6 FCC and other federal agencies will designate  
7 broadcasters as first responders.

8 Charles Dowdy, who owns several radio stations  
9 in McComb, Mississippi, said the biggest issue for  
10 them was also fuel for generators and vehicles.  
11 Local officials offered to give him a little bit of  
12 fuel, but it wasn't enough to keep him on the air.

13 So they organized trips to North Mississippi  
14 every other day to bring back several hundred  
15 gallons for each trip.

16 Stuart Kellogg, the General Manager of WAPT-TV  
17 station here in Jackson said they had hustle across  
18 three states to keep the generators supplied. WAPT  
19 tried to get an emergency letter from FEMA for  
20 diesel and gas, but they had no luck.

21 Many of the smaller broadcast companies in  
22 Mississippi, according to a report put together by  
23 the State Association of Broadcasters, do not have  
24 a generator. They were off the air, depending on  
25 when the power was restored in their own area.

□

1 Really, broadcasters need to be able to buy

2 generators at a nominal cost. This would certainly  
3 help in future storms that might affect their  
4 communities.

5 As you have heard, several broadcast companies  
6 in Mississippi tried to get a letter from state and  
7 federal agencies to guarantee fuel shipments, but  
8 they never happened. It would be good in the  
9 future if gas shipments to broadcasters could have  
10 some type of placard on board to indicate that the  
11 fuel was going to a broadcaster and should not be  
12 confiscated.

13 A couple of other things, fast -- communication  
14 was non-existent immediately following the storm.  
15 Cell phones and regular phone service did not  
16 really work for the first couple of days. WLOX was  
17 lucky to have a HAM operator stationed at our  
18 studio. The Harrison County EOC person sent the  
19 person to work with us.

20 Without the use of a HAM operator, it probably  
21 would have been a couple of days before we would  
22 have known whether the persons in our two bureaus  
23 had survived the storm. Monday night after the  
24 worst of the storm had passed, we were able to  
25 contact the EOCs at the three coastal counties and

□

1 find out some information, and we were able to put  
2 it on the air.

3 For example, we were told where persons should go  
4 for the next day for kidney dialysis because we  
5 were told it was vital to get this information out  
6 because if the dialysis patients did not get  
7 treatment, they would be ill within a matter of  
8 hours.

9 The HAM operator was also able to transmit  
10 vital information between agencies located at the  
11 EOC center and WLOX. Without this link, we would  
12 not have had any way to communicate with officials  
13 along the Coast.

14 We did have satellite phones. They worked on  
15 long distance, but they did not work in the local  
16 area.

17 In the future, if any radio system is designed  
18 for civil defense, it would be my hope that the  
19 media would also have some access to this  
20 technology so we would be able to communicate with  
21 emergency officials.

22 Finally, I understand that there are FEMA cards  
23 that are given out to the news media, but as far as  
24 I know, this did not happen on the Coast. We do  
25 have our own press cards provided by local EOC

□

1 officials, and they enable us to move around  
2 freely; but if you go from county to county,

3 sometimes those are not honored.

4 So it would be good if we had some sort of state  
5 or federal documents that would allow us to be able  
6 to travel around easier.

7 In closing, Mississippi Broadcasters did a  
8 terrific job. No doubt, many lives were saved by  
9 the warnings put out by the broadcasters in our  
10 state, and, hopefully, some of the things we  
11 experienced will help others do an even better job  
12 the next time we have a major catastrophe in our  
13 country.

14 We appreciate y'all coming to Mississippi and  
15 allowing the Mississippi Broadcasters to testify  
16 before this important committee. Thank you.

17

18 Nancy J. Victory, Chair of the Independent Panel

19 Thank you very much. Mr. Archer.

20

21 John Archer, Vice President, Operations

22 XM Satellite Radio, Inc.

23

24 Ms. Victory and members of the committee, my  
25 name is John Archer, and I am the Vice President,

□

1 Operations for XM Satellite Radio. On behalf of  
2 XM, I would like to thank you for having me here  
3 today to talk about the impact of Hurricane Katrina

4 on telecommunications and media infrastructure in  
5 the Gulf Coast area.

6 As you probably know, XM is the leading provider  
7 of satellite radio services in the world today  
8 offering 160 channels of high quality, continuous,  
9 multi-channel audio service throughout the United  
10 States from downtown urban corridors to the most  
11 rural and remote parts of the United States.

12 During Hurricane Katrina, however, we played a  
13 far more critical role as a vital source of  
14 information for millions of Gulf Coast residents  
15 impacted by the disaster.

16 Today I would like to talk about two major  
17 topics. First, I would like to discuss how XM  
18 served as a critical source of information before,  
19 during, and after Hurricane Katrina.

20 Second, I would like to briefly explain how  
21 satellite technology in general and XM in  
22 particular can play an even greater role in  
23 disseminating information during future disasters.

24 Let me begin first by explaining a bit about  
25 XM's history in satellite radio and technology. XM

□

1 was one of the winning bidders in the FCC auction  
2 held in April of 197-- I'm sorry -- 1997 to provide  
3 satellite radio services using frequencies in a 2.3

4 GHz band.

5 The use of the 2.3 GHz band for satellite radio  
6 is critical because these frequencies are  
7 unaffected by range fading that afflicts many other  
8 satellite services. This is critical during  
9 hurricanes and other severe storms.

10 In 2001, we successfully launched two  
11 satellites. We have since launched a third  
12 satellite in 2005, and we will be launching a  
13 fourth satellite soon. Our satellites provide  
14 coverage for over 99 percent of the contiguous  
15 United States, and those areas where satellite  
16 signals are blocked by buildings terrain, we have  
17 deployed in our operating a network of in-band  
18 terrestrial repeaters to supplement our coverage.

19 Our satellite radio programming is  
20 simultaneously transmitted by our satellites and  
21 terrestrial repeaters directly to subscribers'  
22 receivers throughout our coverage area. The  
23 consumer devices used to receive our programming  
24 are not the typical large, immobile dishes that  
25 receive most forms of satellite communication.

□

1 Rather, our consumer receivers are small, mobile,  
2 and lightweight. Some receivers are as small as a  
3 deck of cards.

4 Our receivers are also very affordable. Some

5 are available for as little \$50, and all of our  
6 receivers are readily available off the shelf  
7 throughout the nation at major consumer electronic  
8 stores or over the Internet.

9 Our receivers also use directional antennas,  
10 which eliminate the need to point the receiver at  
11 the satellite. Also, most of our receivers are  
12 battery powered such that they operate in vehicles  
13 as well as portable satellite radios, which are  
14 becoming increasingly popular. This is important  
15 because it means our receivers continue to operate  
16 even when electrical power is disrupted.

17 I would like to discuss the actions XM took  
18 before, during, and after Hurricane Katrina to use  
19 our satellite infrastructure to deliver critical  
20 information to areas impacted by the hurricane.

21 Let me first note that we at XM acknowledge the  
22 remarkable efforts of the terrestrial broadcast  
23 station employees who braved life-threatening  
24 conditions to help keep televisions and radio  
25 stations broadcasting during the crisis.

□

1 Unfortunately, the forces of nature in many cases  
2 simply proved insurmountable.

3 Indeed, the recent White House Katrina Report  
4 concluded that during Hurricane Katrina, most of

5 the radio stations and television stations in the  
6 New Orleans area were knocked off the air.

7 As Ken Moran, the Director of the FCC Office of  
8 Homeland Security has explained, nearly 100 radio  
9 and television stations remained off the air for a  
10 month after Hurricane Katrina hit landfall.

11 The White House Katrina Report also quotes Paul  
12 McCail, the Assistant Secretary of Defense for  
13 Homeland Defense, as stating that the magnitude of  
14 the storm was such that the local communication  
15 system wasn't simply degraded. It was, at least  
16 for a period of time, destroyed.

17 Of course, it's not just the broadcasters, but  
18 most terrestrial-based communications  
19 infrastructure that was devastated by Hurricane  
20 Katrina. Unfortunately, in times of disaster, the  
21 terrestrial-based infrastructure upon which  
22 American public and first responders rely for  
23 communication and information are impacted by the  
24 same disaster.

25 One form of communication that continued to

□

1 operate without interruption during the storm was  
2 satellite technology. Satellites are located  
3 thousands of miles above the earth and are, thus,  
4 able to operate even when a disaster occurs on the  
5 ground.

6 Although some of our ground-based terrestrial  
7 repeaters suffered damage in the Gulf Coast region,  
8 our satellites continued to deliver critical  
9 information to anyone with an XM receiver.

10 We at XM have long appreciated the critical  
11 benefits of satellite technology in times of  
12 emergency. With that in mind, when Hurricanes Ivan  
13 and Jean hit Florida in September of 2004, we  
14 launched a new channel, XM Emergency Alert Channel  
15 247.

16 This channel is dedicated to providing critical  
17 updated information before, during, and after  
18 national disasters, weather emergencies, and  
19 hazardous incidents to listeners across the  
20 country. On this channel, listeners receive key  
21 information, survival information such as  
22 evacuation routes, shelter locations, and updated  
23 weather and emergency information from impacted  
24 areas.

25 The critical information delivered on these

□

1 channels is received from various sources such as  
2 State and Local Governments, FEMA, the National  
3 Weather Service, the U.S. Department of Health and  
4 Human Services, the American Red Cross, and even  
5 eyewitnesses. We provide listeners with a

6 toll-free number to call to both inform us of  
7 important developments and request more detailed  
8 information concerning disasters.

9 We have dedicated staff that work around the  
10 clock to deliver this information. During  
11 Hurricane Katrina when other means of communication  
12 were disabled, XM Channel 247 served as a key  
13 source of information for hurricane victims, safety  
14 officials, relief workers, and local news and  
15 media.

16 This channel is free. There is no subscription  
17 fee required. All you need to receive this channel  
18 is an XM receiver, and because this information is  
19 delivered by satellite and the receivers are  
20 battery powered, the information will be available  
21 even when terrestrial-based communications  
22 infrastructure is destroyed.

23 In other words, if you have an XM receiver  
24 during a disaster, you will continue to receive  
25 vital emergency information. We received reports

□

1 after Hurricane Katrina praising our service for  
2 its ability to provide critical information when  
3 terrestrial-based media outlets were disabled.

4 For example, an FM subscriber in Metairie,  
5 Louisiana, explained how he used his portable XM  
6 receiver to listen to Channel 247 to keep his

7 neighbors informed of events unfolding during and  
8 after Hurricane Katrina. During Hurricane Katrina,  
9 we established an additional public safety channel,  
10 Red Cross Radio, XM Channel 248.

11 This channel provided information pertinent to Red  
12 Cross workers in the Gulf Coast region as well as  
13 Red Cross aid stations in Houston and other cities  
14 as they assisted in the relief effort.

15 We also donated more than 300 radios for Red  
16 Cross workers to listen to the Red Cross radio  
17 channel. Again, as with XM 247, the Red Cross  
18 Radio was available to anyone with an XM receiver  
19 without a need to pay a subscription fee.

20 Now I would like to briefly explain how  
21 satellite technology in general and XM in  
22 particular are right to play an even greater role  
23 in disseminating information during future  
24 disasters. One of the recommendations of the  
25 recent White House Katrina report was the

□

1 following: To restore operability and achieve  
2 interoperability, there is a strong need for  
3 rapidly deployable, interoperable, communicable,  
4 off-the-shelf equipment that can provide a  
5 framework for connectivity among state, federal,  
6 and local authorities.

7 we think consumer satellite devices available  
8 today can go a long way toward achieving this goal.  
9 The benefit of satellite technology during times of  
10 disaster are obvious. Satellites provide vigorous  
11 coverage and are not impacted by the ground-based  
12 disaster.

13 while XM currently lacks a two-way  
14 communications availability, our one-way  
15 distribution system is particularly effective in  
16 delivering vital information to multiple parties  
17 during a disaster.

18 For example, some of the XM receivers that are  
19 currently available off the shelf display detailed  
20 information on weather and surface conditions  
21 including real time weather radar that enables  
22 precise tracking of hurricanes and other severe  
23 storms such as tornadoes. A mobile emergency crew  
24 equipped with one of these receivers could track an  
25 on-going storm to determine where the areas of the

□

1 most severe damage will likely occur.

2 Armed with such information, emergency personnel  
3 can be deployed quickly to these areas where relief  
4 is most needed. Looking into the future, we have  
5 the capability of delivering a reliable, dedicated  
6 audio channel to emergency personnel and  
7 decision-makers across various levels of Government

8 and across multiple jurisdictions.

9 Imagine, for example, if a federal, state, and  
10 local public safety official were equipped with a  
11 device capable of receiving the XM signal. This  
12 could either be a stand-alone XM receiver, or it  
13 could integrated into another device such as a  
14 public safety wireless device. Through addressable  
15 receiver technology, we could transmit a channel  
16 with critical information that is capable of being  
17 received only by those public safety officials. And  
18 because the information is delivered by satellite,  
19 it would be transmitted not just to the officials  
20 on the ground in the immediate vicinity of the base  
21 station, but to the officials throughout the XM  
22 coverage area including air craft and water craft.

23 This will vastly improve coordination among  
24 various state, federal, and local authorities  
25 responding to a disaster. We believe our

□

1 communication network can play a major role in  
2 achieving this degree of interoperability, and we  
3 look forward to continue our work with federal,  
4 state, and local officials to make this a reality.

5 I thank you for providing me with this  
6 opportunity to speak today. I hope the  
7 recommendations this panel makes to Chairman Martin

8 will recognize the role that satellite radio played  
9 during Hurricane Katrina and how satellite radio  
10 might play an even greater role during future  
11 disasters in disseminating vital emergency  
12 information.

13

14 Nancy J. Victory, Chair of the Independent Panel

15 Thank you very much. Ms. Allen.

16

17 Sara Allen, Ciara Enterprises, Inc.

18 Representing Prometheus Radio Project

19

20 Good morning, ladies and gentlemen. My name is  
21 Sara Allen. I'm President of Ciara Enterprises,  
22 Inc. I'm also the chief consultant for KTAO-FM in  
23 Taos, New Mexico, who recently celebrated 14 years  
24 of transmitter operation using only solar power.

25 I'm also a member of the Media Security and

□

1 Reliability Council Tool Kit Work Group Committee,  
2 and we were tasked with developing disaster  
3 recovery planning tools for all major media in the  
4 U.S.

5 Today I'm here to represent the Prometheus Radio  
6 Project. It's an advocacy group for the low-power  
7 radio movement. I'm here to speak about the  
8 important roles that local community radio,

9 low-power FM, in particular, plays in an emergency  
10 and in the recovery of neighborhoods and towns  
11 after a disaster.

12 I hope you will agree that we must protect these  
13 stations and expand possibilities for communities  
14 to build them. The first story I want to tell is  
15 the story of the attempt to provide low-power FM  
16 radio services to the displaced citizens, victims  
17 of Hurricane Katrina, who were living in the  
18 Houston Astrodome.

19 People need information. Several Houston  
20 community members developed a plan to build and  
21 operate a community radio station located inside  
22 the Astrodome. The proposed station, Evacuation  
23 Radio Services, would broadcast essential  
24 information.

25 The Prometheus Radio Project was contacted for

□

1 assistance and recommended that the Houston group  
2 contact the FCC to request an STA, special  
3 temporary authority. In very short order, the FCC  
4 granted authorization. Despite the quick action  
5 from the FCC, the Houston community group ran into  
6 bureaucratic resistance from the local officials at  
7 the Astrodome. Even with the support from the  
8 Senate office of Kay Bailey Hutchinson, city

9 council members and the mayor of Houston, Harris  
10 county officials refused to grant permission to  
11 allow the radio station to proceed.

12 Eventually, a radio station was set up outside  
13 the Astrodome and did provide essential information  
14 to the displaced residents. The bureaucratic  
15 delays prevented the timely broadcast of important  
16 information to those residents. The Houston  
17 Astrodome officials' reliance on their loud speaker  
18 public address system led to the confusion and  
19 frustration of the residents.

20 Ladies and gentlemen, anyone who has ever tried  
21 to understand what is being said over a stadium  
22 loudspeaker will agree that it is a very poor  
23 choice of communications of essential and detailed  
24 information.

25 The next story is a success story. It's the

□

1 story of how Federal, State, and County Government,  
2 private industry, and volunteers combined to create  
3 a radio station capable of covering a county-wide  
4 area. WQRZ-LP is located in Bay St. Louis,  
5 Mississippi, and it is the effort of Brice  
6 Phillips, a disabled amateur radio operator, who  
7 foresaw disaster and several years ago made the  
8 effort to obtain authorization. His motive is to  
9 ensure that the citizens of Hancock County have a

10 reliable and continuous emergency alert system.

11 After Katrina made landfall, I offered my help  
12 by sending offers of assistance to every Gulf Coast  
13 broadcaster association as well as the Society of  
14 Broadcast Engineers. On Tuesday, September 6, I  
15 received a call from John Poray, National Director  
16 of the SBE, requesting assistance for WQRZ-LP.

17 I coordinated an effort to request an emergency  
18 authorization from the FCC, which was granted. I  
19 also arranged for the necessary equipment to be  
20 ordered and shipped into Hancock County.

21 Working closely with Harris Corporation, the  
22 necessary equipment was on its way by Friday  
23 evening and began arriving that Saturday morning.  
24 On Sunday morning, September 11, Broadcast Engineer  
25 Gary Sessums and I departed from the Hillsboro

□

1 County EOC in Tampa bound for Bay St. Louis and the  
2 Hancock County EOC. We arrived that evening and  
3 joined Gary Minker, also a Floridian, and planned  
4 our work for the following day.

5 On Monday morning, the three of us joined Brice,  
6 and we began the reconstruction of WQRZ-LP at  
7 Brice's surviving 120-foot tower. Brice's home was  
8 destroyed by the storm surge. His transmitter  
9 shack, which had been totally submerged in salt

10 water, and his tower survived Katrina.

11 Brice had taken one of the antenna bays, his  
12 transmitter, and some essential studio equipment to  
13 the Hancock County EOC where he continued to  
14 broadcast before, during, and immediately after  
15 Katrina. He also provided health and welfare radio  
16 traffic using his amateur radio and was the only  
17 means of communication in and out of the Hancock  
18 County EOC immediately after Katrina.

19 Brice climbed the tower several times during the  
20 next few days, and by Thursday evening, WQRZ-LP  
21 went on the air. The signal was strong enough to  
22 cover Hancock County and the most affected areas,  
23 Pearlinton, Bay St. Louis, Waveland, Diamondhead,  
24 Pass Christian, and Kiln, Mississippi.

25 we switched programming from Brice's low power

□

1 operation at the old EOC to the studio we had set  
2 up at the new Hancock County EOC which was now  
3 located at the Stennis International Airport.

4 I was making plans to return to Tampa. Tools  
5 were put away, and the studio was organized and  
6 ready for use. I overheard someone in the public  
7 information office mention a press release  
8 requesting assistance to operate the station. I  
9 volunteered.

10 so it began. "You're listening to WQRZ-LP 103.5

11 FM, the voice of Bay St. Louis, Waveland,  
12 Diamondhead, and the Kiln, broadcasting live from  
13 the Hancock County Emergency Operations Center,  
14 your source for information."

15 I reported for duty Friday morning and went  
16 about developing a program strategy with the public  
17 information office. The first day was a bit loose.  
18 They played music and broadcast news and  
19 information updates as frequently as the PIO made  
20 them available.

21 I overheard talk that the Secretary of Homeland  
22 Security, Michael Chertoff, would be visiting the  
23 EOC, and I was passing by the FEMA office, and he  
24 offered me a hand which I shook; and then the  
25 broadcaster in me took over.

□

1 I didn't let go of his hand and followed it back  
2 to him and said, "Sir, I would like to put you on  
3 the radio station to address the people of Hancock  
4 County."

5 He agreed and became the first of many VIP  
6 guests on WQRZ-LP. I hadn't realized at the time  
7 that I was bucking protocol, and I was informed  
8 later that day that I was lucky that I hadn't been  
9 secured by the Secret Service.

10 I did, however, gain the notoriety and respect

11 of the EOC leadership, which led to the on-going  
12 access to VIP interviews which included  
13 Congressional delegations, Vice Admiral Thad Allen,  
14 Undersecretary Thomas Dorr, and many other locals  
15 and volunteers who shared their stories with the  
16 WQRZ-LP listeners.

17 By the end of the first week, I had developed  
18 programming with regularly scheduled in-depth  
19 updates at 8:00, noon, and 5:00. The PIO developed  
20 a daily newsletter, which I read in its entirety.  
21 Whenever information was updated, I was able to  
22 immediately go on the air with the new accurate  
23 information.

24 Hurricane Rita arrived. There was a new round  
25 of flooding in Hancock County, and the EOC was

□

1 alerting people to move to higher ground.  
2 Hurricane Rita affected us in many ways. It put a  
3 strain on already compromised systems, and the EOC  
4 lost grid power. A damaged air handler motor  
5 caused a fire alarm in the building just as a  
6 tornado warning was being broadcast by the EAS.

7 Brice was on the air and not about to be  
8 evacuated by the fire safety personnel while he was  
9 broadcasting the warning, which included the EOC in  
10 the tornado's path. That was an exciting moment.

11 WQRZ-LP was off the air. Floodwaters had

12 prevented easy access to the transmitter site, and  
13 logistics was unable to refuel the generator. Brice  
14 decided to take matters into his own hands and  
15 floated ten gallons of diesel fuel, wading several  
16 hundred yards through the flood waters to make sure  
17 the citizens of Hancock County had access to  
18 important EOC and EAS information.

19 Thanks to his efforts, WQRZ-LP was back on the  
20 air, but as a consequence, Brice came down with  
21 bronchitis and pneumonia; and I stayed at the radio  
22 station for another week while he recuperated. I  
23 insisted that he take the time to recover so he  
24 wouldn't relapse and I could return home.

25 Brice took my advice and rested until recovered,

□

1 and he was once again able to take over the  
2 controls at WQRZ-LP. Brice continues to bring the  
3 residents of Hancock County essential news and  
4 information directly from the EOC and will continue  
5 to do so as long as necessary.

6 As you will read about in the packet of  
7 information I have brought, WQRZ-LP served and  
8 continues to serve as the life line for the  
9 residents of Bay St. Louis and the rest of Hancock  
10 County, Mississippi. I lived and worked at the  
11 Hancock County EOC for 28 days. Bay St. Louis,

12 waveland, Diamondhead, and the Kiln will no longer  
13 be just a place on the map, but, for me, a place  
14 that I called home.

15 LPFM radio stations have proven to be a valuable  
16 resource before, during, and after disasters. To  
17 continue this service and improve upon it,  
18 organizers from the low-power FM community make the  
19 following recommendations: To ensure that the  
20 greatest numbers of LPFM stations are available and  
21 able to provide service and information in times of  
22 emergency and disaster, the Commission can act on  
23 the recommendations made by the Prometheus Radio  
24 Project and other LPFM community members in the  
25 further notice of proposed rule making, Mass Media

□

1 Docket No. 99-25.

2 LPFM stations should be assured of primary  
3 status with respect to translator applications and  
4 existing translators. Full-power stations should  
5 not be allowed to encroach upon LPFM stations.  
6 This will ensure the LPFM stations will be able to  
7 broadcast accurate local emergency and disaster  
8 information without interference and that the  
9 communities don't lose this trusted source of  
10 information when they need it most.

11 To maximize the number of LPFM stations  
12 available during an emergency, the Commission

13 should do all they can to grant licenses on the  
14 third adjacent frequencies and restate their  
15 support for an expanded LPFM service at a time when  
16 Congress has the mandate to return the power to  
17 license at the third adjacent back to the FCC.

18 There are many other stories of success and  
19 support from low-power community radio stations  
20 included in the packet I've brought. To reiterate,  
21 it is community radio, which is so vitally placed  
22 to provide information, relief, and communications  
23 before, during, and after an emergency. Thousands  
24 of volunteers stand by ready to help.

25 On Friday, March 10, I will attend the final

□

1 session of the Media Security and Reliability  
2 Council 2 to be held in Washington, DC. It is my  
3 sincere hope that Chairman Martin re-charter the  
4 MSRC to enable the accomplishments of MSRC 1 and 2  
5 to be disseminated to the broadcast industry in the  
6 form of outreach. Thank you.

7

8 Nancy J. Victory, Chair of the Independent Panel

9 Thank you very much. And, finally, Ms.

10 Antoon.

11

12 Marie Antoon, Mississippi Public Broadcasting

13 Thank you very much. Good morning. I would  
14 like to thank the members of this special committee  
15 and the Chairwoman for this opportunity.

16 First of all, I am Marie Antoon. I am the  
17 Executive Director of Mississippi Public  
18 Broadcasting, and we are an eight-radio and  
19 eight-television station network. We go from the  
20 Gulf Coast all the way up to Memphis, and I mention  
21 that because we reach into parts of Louisiana to  
22 Mobile and even over into Northwest Florida; and  
23 one of our roles is really in the evacuation  
24 process.

25 If the Hurricane Center puts out an alert for

□

1 anywhere from Louisiana all the way over to  
2 Pensacola, you will find that evacuees from those  
3 Gulf Coast areas begin to travel through  
4 Mississippi, and because we are a multi-station  
5 network, we are able to handle them as they come  
6 into the state all the way up to Memphis to give  
7 them road information, to give them information  
8 about shelters, where they can go with their  
9 horses, where they can go with their dogs, that  
10 sort of information.

11 This is slightly different than what Dave and  
12 others present to their communities. I will tell  
13 you that we've been in this business for 30 years,

14 and we've learned a lot from hurricanes; but what  
15 we had learned in those 30 years did not in any way  
16 prepare us for what happened in August.

17 And I will also say that we kept WLOX television  
18 and WWL television on the Internet up during the  
19 hurricane coverage in order to get direct  
20 information from those counties. These two were  
21 24/7 for over a week.

22 In the end of all of that, I would like to say  
23 that we hope that we have, you know, carried out  
24 our mission to the best of our abilities, but  
25 listening to some of the people at the early part

□

1 of this panel, it's obvious that we still have work  
2 to do; and I will tell you that we learned a  
3 valuable lesson.

4 We did not have someone who could speak Spanish  
5 in the control room during that -- during those  
6 days, and that is a mistake we will not make again.

7 I would like to tell you a little about what our  
8 weaknesses are, but I also want to tell you about  
9 what we think the future holds and some of the  
10 technologies that we are seeing come on board in  
11 part because of the rule making of the FCC and the  
12 transmission of television from analog to digital  
13 and what that means for spectrum.

14 This whole concept of new technologies is only  
15 possible because of the investment of  
16 telecommunications and technology companies such as  
17 Harris, Spectra, Rosetex, Northrup Grumman, Trivini  
18 Digital, and the company I'm going to talk to you  
19 about right now, GSS.

20 These companies have seen an opportunity in  
21 radio and television that -- and come up with new  
22 technologies that I think you will find as first  
23 responders helpful. There are two things I want to  
24 say about these. Nothing I'm about to tell you is  
25 going to be a silver bullet, and, secondly, though,

□

1 everything I'm about to tell you is either  
2 operational today or could be operational in the  
3 next 18 months or even sooner with funding.

4 The first thing I want to tell you -- and just  
5 to kind of say it because you heard it before --  
6 fuel, but also towers are our weakness. The tower  
7 situation is I have a 1500-foot tower in McHenry,  
8 which took 125 mile-an-hour winds. It's 30 years  
9 old.

10 And I do think that the FCC and this Commission  
11 needs to look at the hardening of certain broadcast  
12 aspects in certain areas. As Dave said, there are  
13 a lot of assets on the Gulf Coast, and we were in  
14 danger of losing a number of them; and I think it

15 is very important for you as panel members to look  
16 at the hardening, maybe not of all broadcasters,  
17 but of some broadcast assets.

18 But one of the things that is happening, this  
19 fall, the Mississippi Department of Homeland  
20 Security came to us and said, "Listen, we want to  
21 deploy immediately an ability to reach first  
22 responders."

23 We said, "Sure."

24 And they said, "We want to use your FM  
25 transmitters. They cover 95 percent of this state.

□

1 They were proved to be robust during the  
2 hurricane."

3 We stayed on the air the whole time. The  
4 towers, even though we were a little hesitant about  
5 them, stayed up.

6 So in June, over an eight-day period, only eight  
7 days, they deployed a system that will reach first  
8 responders with this or any other to come new  
9 devices. Those devices can be addressable, meaning  
10 they can go to Hancock County, but not Stone  
11 County. They could go to this city or that city,  
12 but not the whole state with first alerts.

13 The other thing is they have the power to  
14 trigger that. We don't touch it. We've given them

15 that authority to use our bandwidth, and they can  
16 on their own trigger these responses without, you  
17 know, us even knowing it.

18 I think it's a technology that needs to be  
19 looked at, in particular because I heard earlier  
20 someone say, you know, the problem with people who  
21 have disabilities. Ed worthington told me earlier  
22 today that he is already beginning to talk to a car  
23 company about this, and if this technology could be  
24 put into -- so that you maybe know it's not Barry  
25 Manilow on the radio, but, rather, that there is an

□

1 evacuation route that is blocked, then I think you  
2 would have the beginning of a layered approach to  
3 some of our problems.

4 The next thing I would like to talk to you about  
5 is on the television side. We are participating in  
6 two demonstration projects right now. After 9-11,  
7 the New York public television station, WNET,  
8 created a project called guard. It uses what was  
9 generally known as ITFS and is now called Education  
10 Broadband Service.

11 And in your packet that I provided to you is a  
12 DVD about this project, and what they've been able  
13 to do is create a two-way system, two way, video,  
14 data, voice, any digital, any digital content at  
15 all, and be able to send it addressable,

16 encryptable to fire, to first responders, to anyone  
17 who has -- who can hook up basically to a WiFi.

18 I'm not talking about technology that is  
19 priority or, you know, that you have to have a  
20 certain kind of receiver. It could be simply a  
21 WiFi card in a laptop, plus it will manage itself.  
22 You can receive those signals in a moving vehicle  
23 up to moderate speeds.

24 So I encourage you to look at that. I think  
25 that we hope that using our education broadband

□

1 service frequencies which we in Mississippi have  
2 all 20 channels -- that we can deploy something to  
3 help Mississippi first responders with a different  
4 kind of technology beyond just radio.

5 The second project I would like to tell you  
6 about that we also are participating in is  
7 something called the DEAS project, which also has  
8 been presented to Congress, and in that project,  
9 another device just like this, the APTS, American  
10 Public Television Stations, created a demonstration  
11 for the Senate in which they had a room in which  
12 there were computers, laptops, cell phones, pagers,  
13 radios, televisions; and from WETA in Washington, a  
14 signal was sent over WETA's digital television  
15 signal that triggered every single one of those

16 devices at once.

17 The potential there is to reach multiple devices  
18 using digital television signals in a concept  
19 called data casting. Again, now, this may be one  
20 way, but it is full-scale video. It is anything  
21 that you can put into a packet, whether it's voice,  
22 streaming video, or some kind of map or any kind of  
23 other critical information.

24 I'm going to get out on a limb just a little bit  
25 here. While that technology, digital television,

□

1 is thought as a one-way technology right now, I bet  
2 you anything that there are some people out there  
3 in the vendor community that could make it two way.  
4 As a matter of fact, I have talked with some of  
5 them, and they have backed away from it just a  
6 little bit.

7 So while we cover -- think of it. We cover 95  
8 percent of the state of Mississippi with digital  
9 television right now, and if I could turn my  
10 transmitter into a way to send to anyone  
11 information from the Governor or anything like that  
12 and they could respond over the air, that's a very  
13 powerful tool.

14 Finally, I want to make just a couple of  
15 comments about your public radio and public  
16 television station. Digital television will reach

17 100 percent, has a footprint of 100 percent of the  
18 United States. NPR today has a footprint of 95  
19 percent of the United States.

20 Both of these are hooked together using  
21 satellite communications, and the PBS engineers  
22 tell me that the new interconnect could be created  
23 in such a way that it could mesh networks together  
24 of public television stations that are not  
25 interconnected and provide data testing to them so

□

1 that, like in Mississippi, I control all eight  
2 television stations. But in Tennessee, those are  
3 all individual stations.

4 But you could create a network on demand using  
5 those public television stations.

6 Lastly, I would like to thank the staff of the  
7 FCC. They were some of the first people to call us  
8 after the hurricane, and they were very kind and  
9 offered their help; and a few days after the  
10 hurricane hit, I did call them for some help.

11 The Fox television station on the Gulf Coast had  
12 gone off the air, and Fox wanted to air the Saints  
13 game; and so I called up and asked for a waiver so  
14 that our non-commercial WMHH could carry the  
15 commercial broadcast of the Saints. And the FCC  
16 staff turned it around very, very quickly that

17 said, because of the pain and suffering on the Gulf  
18 Coast, that we would be allowed to carry the  
19 commercial broadcast of the New Orleans Saints.

20 Now, if you are like me, you followed the Saints  
21 for a number of years. I thought to myself, you  
22 know, I'm about to cause more pain and suffering  
23 than I might be easing.

24 But I thank you, Madam Chairman, for this  
25 opportunity, and I hope you will take a minute to

□

1 look in your packets and see this information. I  
2 think it is something you should all consider in  
3 the future.

4

5 Nancy J. Victory, Chair of the Independent Panel

6 Thank you very much, and thank you to all the  
7 speakers.

8 Let me turn it over to my fellow panel members  
9 to ask questions. I would note that Mr. Roberts  
10 does need to leave early, so if I could ask that  
11 you direct your questions to him perhaps first. Go  
12 ahead, Billy.

13 MR. PITTS: Mr. Roberts, the Select  
14 Committee on Katrina talked a lot about false  
15 reports panicking the people about murders in the  
16 Superdome in the bathrooms, shooting at helicopters  
17 delayed the national guard getting in, et cetera.

18 I agree with you that we need to have  
19 an emergency alert system, national system, but  
20 shouldn't it be at the community level so that they  
21 can get the word out about what is really happening  
22 as well as the broadcasters?

23 MR. ROBERTS: Well, the Florida  
24 experience -- and I think we are still looked at as  
25 the model for EAS in the country, and we have --

□

1 our Governor has two entry points; and then the  
2 County could set it off as well. It's the County  
3 EOC, at that local level.

4 I'm one to believe the President ought  
5 to be able to access it from anywhere. The  
6 Governor ought to have two entry points, and the  
7 county elected leadership should be able to access  
8 it.

9 So I would agree with you. In having  
10 gone through all these hurricanes and some other  
11 disasters, they may be my blessed friends, but the  
12 cable news 24-hour networks, I think if you go back  
13 and look at the things you're talking about, it had  
14 more to do with them than the local broadcasters  
15 reporting false information.

16 I think you will find we were pretty  
17 responsible because we were there and had been

18 there and knew the community unlike people that jet  
19 in. I mean, my biggest nightmare in Florida if we  
20 have a national disaster is not the local media  
21 that know the streets and know the local law  
22 enforcement. It's the people that drop in out of  
23 their parachutes and have never been there, but now  
24 become experts on my town.

25                   So I think if you look at local

□

1 broadcasters, we normally are the responsible ones,  
2 but -- and let me say, Florida has learned. We  
3 trained.

4                   Southern Mississippi has a hurricane.  
5 New Orleans had a flood and a very ugly flood, but  
6 to compare, I think that goes to not an issue of  
7 communications or FCC, but having been to all of  
8 these storms and seeing -- if you don't have local  
9 law enforcement and local responsibility, you can't  
10 bring in the support that you need, whether it is  
11 food, water, ice, generators, unless you have a  
12 controlled infrastructure in place where there is  
13 not chaos.

14                   And I don't think you can blame the  
15 media or anybody else. I think you have to look at  
16 Local Government.

17                   Southern Mississippi -- I was here  
18 right after Camille, a week after Camille, and I

19 was here a day after Katrina. Both were two of  
20 probably the four worst storms in the history of  
21 this country, but there was no chaos in Southern  
22 Mississippi. There was confusion. There was  
23 disaster, but there wasn't lawlessness and chaos.  
24 The people in this town showed up at the corner and  
25 directed traffic and helped their neighbors.

□

1                   So I think you've got to look at Local  
2 Government for that.

3                   PANEL QUESTION: If I could follow up  
4 on that, we are all anxious on the panel about the  
5 upcoming hurricane season. Is there any  
6 recommendation that you, Mr. Roberts, or any of you  
7 on the panel about what we ought to be doing in the  
8 next 30 to 60 days to try to get in place.

9                   MR. ROBERTS: I'll let them speak  
10 after me. We're already in high gear. I met with  
11 the Governor's staff earlier this week. We're  
12 revising all our public education things to deal  
13 with needs we did not recognize before like inner  
14 city poor that have -- you've got to realize that  
15 they can't move themselves. We need to move them.  
16 That's the responsibility of Government -- the  
17 elderly in the high rises.

18                   We're going to redo all our media

19 campaigns. Max Mayfield is a very, very close  
20 friend of mine for 20 years. He is of the opinion  
21 that this has nothing to do with global warming.  
22 You can go back 100 years. It doesn't really  
23 matter.

24 He truly believes we're in a cycle,  
25 and we've got another five to seven years of

□

1 abnormally high storms. So Florida is preparing as  
2 if we're going to get hit four times,  
3 unfortunately. We hope that's not the case.

4 MR. VINCENT: On the Mississippi Gulf  
5 Coast, we face -- and also in Louisiana, I would  
6 say, to a good extent, a large extent, we faced  
7 some big problems that we've never faced before.  
8 We have thousands of people living in FEMA trailers  
9 that are really not built to sustain very high  
10 winds.

11 And so this year as we go into  
12 hurricane season, something is going to have to  
13 thought about how to evacuate these people and how  
14 to evacuate them faster.

15 Also, on the Mississippi Gulf Coast,  
16 we have two large bridges. So there's no really  
17 east/west route along the Coast. So you're going  
18 to have to go north right away.  
19 So we have a lot of challenges that we've never had

20 on the Mississippi Gulf Coast before, and I think  
21 hearing from people with the National Organization  
22 of Disabilities, I think it's very important that  
23 we do work with these organizations; and we did  
24 start working with organizations last year.

25 Our biggest problem was when the storm

□

1 approached, we had had a person doing sign language  
2 at WLOX, but when 6:00 came on Sunday night, this  
3 person said, "I have to evacuate."

4 So what do we do? I mean, we do the  
5 best we can getting our closed captioning, but we  
6 need to have some people that maybe are willing to  
7 stay through the storm like we are to get that  
8 information out; and we told the person, stay as  
9 long as you can; we'd love for you to stay with us.

10 But the person said, no, I have a  
11 family; I have to take care of them.

12 And we understand that. But I just  
13 wanted you to know that we did have a person at the  
14 station, but we can't guarantee how long they're  
15 willing to stay with us.

16 PANEL QUESTION: Mr. Roberts, could  
17 you elaborate a little bit about your statement that  
18 apparently, in prospective, the President can only  
19 speak to the nation through EAS and the National

20 weather Service; is that correct?

21 MR. ROBERTS: Yes. I told this to the  
22 former head of FEMA, and I told this to members of  
23 Homeland Security.

24 On 9-11, there's a report out about  
25 this. But if you go back and look, there was the

□

1 PEP stations, the primary entry point stations.  
2 The one in Florida doesn't work. In fact, four  
3 years ago, it was actually wonderfully tied into  
4 EBS, not EAS, but now it has moved; and they're in  
5 the process of relocating it.

6 If you're not aware, the PEP stations  
7 have never been tested, number one. Number two,  
8 they weren't up to speed four years ago. Reynolds  
9 Hoover is a great guy. He used to be at FEMA.  
10 He's now at the White House instead of COO and COG,  
11 continuity of Government and continuity of  
12 operations.

13 He is working to improve the PEP  
14 stations, and, hopefully, they will be working  
15 within another six to twelve months; but my  
16 understanding is there's about -- there's 34 PEP  
17 stations in this country that are hardened radio  
18 stations with bunkers and food for 30 days to  
19 protect the employees that would stay there during  
20 a nuclear attack.

21                   It is my understanding they are going  
22 to try to get up to about 50, but even the current  
23 group, not all are still operating. On the day --  
24 and the system has never been tested. Keep that in  
25 the back of your mind.

□

1                   So it is the opinion of most people  
2 I've dealt with that on 9-11 if they had set off  
3 the tones on the PEP station, we would have been  
4 lucky if 20 percent of the population had heard it.

5                   After that became aware in '02,  
6 Reynolds worked very hard, and he's the guy at the  
7 white House in charge of protecting the office of  
8 the President, not the person who has the office.  
9 So his job is the bunkers and all the things to  
10 take care of whoever is President, but it's my  
11 understanding now he is set up for the President at  
12 any place in the world to have access going through  
13 the National weather Service in any city or  
14 location because it's the only national federal  
15 system that could turn on all of our EAS equipment.

16                   PANEL QUESTION: Just as a brief  
17 follow up, I challenge you to find a little more  
18 information about some of that because I know that  
19 last week we actually ran a test on WWL where they  
20 did directly connect to the station and take over

21 the operation of the station for a test of the --

22 MR. ROBERTS: Did they set off the  
23 whole federal PEP stations last week?

24 PANEL QUESTION: No. I said in New  
25 Orleans for particular.

□

1 MR. ROBERTS: No. No. I'm saying the  
2 President can't set off the entire nation. On  
3 9-11, everybody believed the President could speak  
4 to the nation by hitting a button with a set of  
5 codes that they carried in the football, by the  
6 way.

7 Mike Brown about fell out of the chair  
8 because he looked at me and said, "Don't we have  
9 codes to go?"

10 And they went, yeah.

11 And he said to Tim --, who was head of  
12 it, "Are you telling me you're not sure it works?"

13 He goes, "I don't think it does work."

14 And they've worked dramatically since  
15 then, and I know New Orleans is one of the cities  
16 they're trying to put on the forefront and New  
17 York. Now, those 17 cities that are the highest  
18 ones on Homeland list, they're making sure they go  
19 first; and they're trying to get Orlando back up  
20 and operating.

21 But what I'm saying is, back then, it

22 didn't work. Today I don't think you'd reach 70  
23 percent of the country. Now, 20 percent was about  
24 four years ago.

25                   So we've made headway, but the

□

1 American public believes the President can do it.  
2 He can't. That's what I'm saying, and the good  
3 news is they've got all the news people following  
4 with him around the country.

5                   So the odds are, you don't need it. I  
6 mean, we don't normally need it in a hurricane. I  
7 mean, we know it's coming. I mean, we're told five  
8 days ahead it's going to hit you.

9                   So, I mean, I've debated whether we  
10 even need an EAS system at times, but if we're  
11 going to have it, I think it should work for  
12 governors, county managers, and the President.

13                   MR. BEARY: Mr. Roberts, in Florida,  
14 it has paid big dividends, and we also use it for  
15 our Amber alerts and everything else; and I like  
16 your idea, if the President is going to have it, he  
17 ought to be able to do it out of a cave in west  
18 Virginia or anywhere else that he's got to do it  
19 from. And it has been very beneficial in Florida  
20 when the Governor can get on and speak English and  
21 Spanish to the folks, and then it also gives access

22 to local, city, county officials who need to get  
23 the word out.

24 MR. ROBERTS: I think we're the only  
25 state that does both English and Spanish on the EAS

□

1 as far as I know. That has come up with the FCC,  
2 and I know we do it in both English and Spanish  
3 every time we do it; and our Governor sometimes  
4 does the message himself. And he is bilingual.

5 But an Amber has been one reason that  
6 has been moved up in the awareness. I hope every  
7 state has it, and a number of them now are looking.  
8 I think 11 states now have a system where their  
9 governor can access, but only 11 governors can  
10 access their EAS programs.

11 MR. BEARY: This has been a very  
12 beneficial meeting because I've already e-mailed  
13 back to some of my folks because I know we've got  
14 sign capabilities, but it's almost to a point in  
15 state EOC's, what I'm getting today, is that, like  
16 your Mississippi radio station, sir, had a sign  
17 person attached until they had to evacuate.

18 Maybe that's somebody that we need to  
19 hire or have a service for that when there is an  
20 emergency, they are around the EOC's 24/7, you  
21 know.

22 You know, in Orlando, Florida, I have

23 179 nations that come and visit our tourist  
24 attractions every year. I have probably a language  
25 capability of over 200 different languages and

□

1 slangs so that we can talk to people. We ought to  
2 be able to do the same for some of these special  
3 needs, and I was very interested in what both of  
4 y'all said.

5 MR. ROBERTS: On the signing -- and I  
6 think our people try to do the best. I will warn  
7 all of you and if you want to put it in the report,  
8 if you're going -- at our EOC, our Governor, when  
9 they hold news conferences, we put it on the  
10 satellite for everybody, clean feed.

11 The world gets to watch it. Y'all see  
12 it on the weather channel or whatever.

13 What we're going to try to do next  
14 year is move the signer to the left-hand side of  
15 the picture when it's dropped in. There's a  
16 reason. We don't have the brightest people in the  
17 world that -- most of us in broadcasting are C  
18 students.

19 The logo, if you watch television at  
20 night and they drop their local logo or their  
21 network logo, it's in the right-hand corner. If  
22 you put the signer in the right-hand corner, we're

23 going to put the logo right over the top of them  
24 every time, you know, and that is nothing but a  
25 person at a switch station down in the basement;

□

1 but it happens over and over.

2 So if you're going to do signing at  
3 the state level or whatever, I'd say make sure you  
4 put it to the left, and then you don't have to  
5 worry about that person in the control room who is  
6 like the rest of us, not real bright, you know.  
7 They mess up sometimes.

8 MS. VICTORY: Go ahead, Steve.

9 MR. DAVIS: This is for Dave Vincent.  
10 Dave, as you pointed out there were many  
11 deficiencies that were exposed in Hurricane  
12 Katrina, and, unfortunately, there are more  
13 questions than solutions both from your panel and  
14 from the, quote, experts sitting around the table  
15 here.

16 I will solve one of your problems for  
17 you. I will ensure that we take the necessary  
18 steps in Harrison County so that you can  
19 communicate via the public safety radio system with  
20 the EOC. We'll take care of that.

21 MR. VINCENT: Thank you.

22 MR. DAVIS: The media did a  
23 commendable job on the Mississippi Gulf Coast.

24 Your station provides essential information to all  
25 of South Mississippi during times of disaster,

□

1 however, your facility is located one block from  
2 the Gulf of Mexico.

3 At the EOC, I received a number of  
4 calls asking to go and force your people to leave  
5 because you're in a mandatory evacuation zone. Of  
6 course, we didn't do that.

7 Hurricane season is approaching again.  
8 Katrina was a Category 3 storm. Category 4 -- your  
9 station, my house will probably not survive.

10 Are there any plans for a redundant or  
11 back-up transmittal site for WLOX?

12 MR. VINCENT: That's a good question.  
13 In fact, that's one we've been working on. Our  
14 station made it -- we moved there right after  
15 Hurricane Camille. We wanted to be north of the  
16 railroad tracks because everything south of the  
17 railroad tracks was destroyed pretty much in  
18 Camille, and though we did receive some damage, we  
19 did not receive any floodwaters; and I still don't  
20 believe that we wouldn't in future storms.

21 But we are working on that, Steve. We  
22 are talking to WDAM. Raycomm Media owns us, WLBT,  
23 and WLOX.

24                   WDAM is located about 70 miles from  
25 the Mississippi Gulf Coast, and we're thinking

□

1 about, if we really got hit by a hard, bad storm  
2 again that sometime during this situation, we would  
3 try to cold broadcast with WDAM out of Hattiesburg,  
4 Mississippi; and we think -- they're 70 miles away.  
5 The storm winds would be better.

6                   what we probably would do is evacuate  
7 a good part of our people there and keep still a  
8 core -- not a core, but a small group of people at  
9 WLOX to try to keep it on the air as best we can.

10                   I consider ourselves first responders.  
11 Ambulance workers, police -- you put yourself in  
12 harm's way once in a while. You don't want to, but  
13 to get the job done, you have to take some risks  
14 that maybe some of the public doesn't think we have  
15 to; and I know, as broadcasters, occasionally  
16 hurricanes come up and we can get hurt. Thank  
17 goodness no one has yet.

18                   But we are working on a system, Steve,  
19 that hopefully would make us a little bit stronger  
20 even in the future by working with WDAM, our sister  
21 station.

22                   MS. VICTORY: Marion has the next  
23 question.

24                   MS. SCOTT: My question is directed to

25 Ms. Heppner and Styron. I was wondering, with the

□

1 technologies that you have heard described and all  
2 that you know about the technologies that support  
3 our fellow citizens with disabilities, is there a  
4 one size fits all or a good, better, best that you  
5 could recommend to the panel so that we could carry  
6 those thoughts forward.

7 MS. HEPPNER: What technology are you  
8 talking about specifically?

9 MS. SCOTT: Well, I guess I'm asking  
10 you because a number of technologies were  
11 described. People were talking about satellite and  
12 about personal pagers and about, of course,  
13 broadcast television and radio and hard line  
14 telecommunications and those kinds of things.

15 MS. HEPPNER: The answer is it's not  
16 one size fits all. People who are deaf and hard of  
17 hearing, they run the whole spectrum, and just like  
18 anyone else, it's so important that we have  
19 redundancy, that we have -- that we can get  
20 communications.

21 So it's possibly more important for us  
22 than it is for anyone else because if I am someone  
23 who needs an amplified phone and that's no longer  
24 available to me, I can't expect to go back to a

25 phone or a cell phone. I maybe could -- I --

□

1 things like that. Perhaps depending on television,  
2 but not a sign language interpreter.

3 So it's very important that if you  
4 have a solution for someone who has hearing that  
5 you also have one that also makes it adaptable for  
6 someone who does have a hearing loss.

7 MS. STYRON: I would just follow up  
8 with that and suggest that the comments about  
9 having the scroll messages available and vehicles  
10 or using your Amber alert system, that doesn't just  
11 help the disability population. You do realize  
12 that it will help individuals who can hear, that  
13 communication access is good for all people.

14 If you're taking over the XM satellite  
15 broadcast on your scroll in your TV or in your car,  
16 it will help an individual who can hear as well to  
17 know what the emergency alert information is.

18 As Cheryl had said, there's not really  
19 a one size fits all. The redundancy is critical,  
20 especially if any of this infrastructure fails in  
21 another disaster.

22 So I would encourage you to keep that  
23 in mind, as many access points that we can have  
24 without asking for the entire moon -- I understand  
25 that. But it's better for the redundancy, and each

□

1 individual has a different nuance with their  
2 disability for access.

3 MS. VICTORY: Thank you.  
4 Adora.

5 MS. NWEZE: Thank you, Madam Chair.  
6 I'm sorry that I didn't get a chance to ask a  
7 question before Mr. Roberts left, but I hopefully  
8 will have another opportunity.

9 I would like to ask those of you who  
10 were here representing both radio and television  
11 networks -- we've not had the opportunity to hear  
12 from black and minority owners about what kind of  
13 challenges they face in getting to the black and  
14 minority communities. We have a large percentage  
15 of black persons who were impacted, both New  
16 Orleans, obviously, throughout Louisiana and here  
17 in Mississippi as well and, certainly, in Florida.

18 But I just wondered if you had an  
19 opportunity to talk to any of the black-owned radio  
20 station managers or owners of that particular media  
21 and what are they facing.

22 PANEL COMMENT: I'm not really sure, but  
23 I thought that one of them might have been here  
24 yesterday. There was a gentleman we worked with,  
25 and I must admit his name --

□

1 MS. NWEZE: No one testified.

2 PANEL COMMENT: No. But he was in the  
3 audience, I think, but I think that a lot of the  
4 local broadcasters -- you know, I am a state -- I  
5 represent a state network. And I can tell you that  
6 it's always top of mind where we are, and I'm very  
7 proud of the kind of work that we've done in terms  
8 of integrating our communities.

9 we also were worried about the  
10 Vietnamese communities and others across the state.  
11 I think that all small stations are going to face a  
12 lot of the kind of issues that Dave described,  
13 meaning fuel, meaning, you know, infrastructure  
14 where they're located, and I think that one of the  
15 things the panel might be able to do is to look at  
16 that spectrum and pay attention to those particular  
17 class of owners in order to make sure that -- you  
18 know, frankly, you know, we weathered that storm --  
19 our closest transmitter was in McHenry -- fairly  
20 well.

21 we had about a million dollars worth  
22 of damage, but, you know, we will be able to  
23 manage.

24 But I think that there might be some  
25 issues there for those stations that might have had

□

1 damage in terms of recouping costs, insurance, and  
2 things like that. Being a state agency, we have  
3 certain advantages that perhaps smaller stations  
4 don't have.

5 MS. VICTORY: I'm going to take one  
6 more question because I need to keep us on track,  
7 but go ahead.

8 MS. ALLEN: I would like to address  
9 that last question, if I may.

10 MS. VICTORY: That will be fine.

11 MS. ALLEN: This is Sara Allen. As  
12 far as low-power FM radio movement, that's one of  
13 the things that can help address those communities  
14 issues where you have various black or Vietnamese  
15 communities that need broadcasters to speak their  
16 language, so to speak, and I think the LPFM radio  
17 project is a good answer for that.

18 MS. VICTORY: Tony Kent, last  
19 question.

20 MR. KENT: This is to Mr. Vincent.  
21 First, thank you for what you have done to help  
22 inform people on the Coast and to all your  
23 broadcasters. You guys did a good job.

24 You were asking about fuel. It was  
25 obviously a problem.

□

1                   Are you asking that FEMA provide  
2                   broadcasters fuel or just that you have  
3                   credentialing that your privately purchased fuel  
4                   not be diverted?

5                   MR. VINCENT: The latter. We're not  
6                   asking anybody to buy anything for us. We had  
7                   bought our own fuel, brought a tanker truck out of  
8                   Lake Charles and, you know, was confiscated.

9                   Also, Mississippi Broadcasters had  
10                  worked with WXXV and helped buy some fuel for them,  
11                  and it was confiscated by the State Government.

12                  We just are asking that we have some  
13                  means that if we're bringing in fuel for  
14                  broadcasting, for the generators that keep us on  
15                  the air, that this fuel not be confiscated because  
16                  I think state and federal agencies have probably  
17                  better access than even we do. And we had worked  
18                  with one of our sister stations, KPLC in Lake  
19                  Charles, to bring in this fuel, and then just to  
20                  have it confiscated, you know, it really puts us in  
21                  a bad situation because we have all these people  
22                  out there wanting to know what is going on. If we  
23                  cannot broadcast to them, it really puts us in a  
24                  bad situation. It also even puts the public in a  
25                  worst situation.

□

1                   So that's all we're asking is that we  
2 be able to have some sort of placard or have some  
3 sort of understanding that the media can get the  
4 fuel in without it being confiscated, but we would  
5 pay for it.

6                   MS. VICTORY: Thank you very much, and  
7 thank you to this group of speakers.

8                   We are going to take about a  
9 ten-minute break. We are going to commence again  
10 at 11:25 with our last panel.

11                   Thank you again, and we will see you  
12 in ten minutes.

13 (A Break Was Taken and will reconvene at 11:25  
14 a.m.)

15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

□

1                   MS. VICTORY: Before I introduce our  
2 last panel, I wanted to turn the microphone over to  
3 Commissioner Tate who I knew wanted to say a few  
4 words.

5

6                   Commissioner Deborah Taylor Tate  
7 Thank you. I wanted to just thank all of you  
8 all again for your participation. I just think it  
9 is so critically important to have those of you who  
10 have been through this before.

11 I have also talked with the Chairman, and I'm  
12 looking forward to getting to know you all more in  
13 the future because one of the issues that I have  
14 been concerned about, given my past dealing with  
15 children and health issues and persons with  
16 disabilities in Tennessee, is the fact that we have  
17 best practices and lessons learned from 9-11 and  
18 now from Katrina, actually from lots of natural  
19 disasters that you all have spoken about over the  
20 past two days, but what will happen if there is a  
21 pandemic or something that occurs to our energy  
22 systems, gas pipe lines, or to our water supply.

23 So the Chairman has been talking about also  
24 moving forward on those arenas. The Majority  
25 Leader, Senator Frist, is not only my senator, but

□

1 also a friend and a physician.

2 And so his office has been taking a lot of  
3 leadership in that arena. So I've had an  
4 opportunity to talk to some of you all  
5 individually, but I'm now just saying I hope that  
6 you all will also help us think through those  
7 issues as we move forward.

8 I think that while telecommunications was the  
9 topic, which also includes broadcasting and other  
10 types of communications with the American public,  
11 what has really come through to me is just the word  
12 "communication," whether it is one to one, whether  
13 it is one to a thousand, whether it is one to a  
14 million, and when I open this booklet -- and I'm so  
15 sorry that I missed the first panel.

16 But I thought, this is really what the two days  
17 have boiled down to, and that is communication is  
18 key.

19 I also wanted to tell you all that I have been  
20 taking notes. And so I have a list of things to  
21 take back to the Chairman and to all of my  
22 colleagues at the FCC, and I'm sure you all will  
23 have a full report at the end.

24 But I just wanted to run through quickly a few  
25 of the ones that I had written down. Obviously,

□

1 several of them are around the national alert  
2 system and regional planning commission, training  
3 on the unlicensed spectrum, uses and technology,  
4 pooling communications funding at all different  
5 levels, the pecocells, education and PR regarding  
6 all of the topics that we've talked about so we  
7 don't just learn it and put it in a report, but  
8 that we're constantly pushing that information out  
9 to the American public, which I feel is something  
10 important for the FCC to do in partnership with you  
11 all. Re-chartering the NRIC, which I hope to learn  
12 more about, a national IP network and mutual aid  
13 plus NTIA coordination, central points of contact,  
14 which many of you all have said over and over and  
15 which I heard even as a Commissioner back in  
16 Tennessee, if we just had one person that we knew  
17 to call, whether it was inside a corporation or  
18 inside the FCC.

19 And then a lot of you have mentioned this whole  
20 concept of credentialing.

21 So that in no means is an exhaustive list, but I  
22 did want you all to know that I plan to take some  
23 of those issues back and look forward to learning  
24 more. As you all know, I just started this job on  
25 February 3rd.

1       So I'm working hard to catch up with all the  
2 rest of you all, but, again, I feel so honored to  
3 be here. Yesterday it really dawned on me when --  
4 I think it was Hu Meena who might have brought up  
5 the 238 people who lost their lives.

6       So this is really a critical opportunity for all  
7 of us, and I value the opportunity. I'm honored to  
8 be here, and I thank Nancy and all of you for your  
9 leadership for all of us as consumers and all  
10 Americans.

11       So thank you. I'm going to stay as long as I  
12 can, but I wanted to just take a moment in case I  
13 had to get up and leave. So thank you.

14

15       Nancy J. Victory, Chair of the Independent Panel  
16 Thank you very much, Commissioner.

17       Before I introduce the next panel, we have had a  
18 sign language interpreter. Do their services  
19 continue to be required? Otherwise I will give  
20 them a break.

21               So if anyone does require the sign  
22 language interpreter, please identify yourself. It  
23 would be very, very helpful. If not, thank you  
24 very much.

25               Let's turn to our last panel. We are

1 very excited to hear what you all have to tell us  
2 today. Let me go ahead and introduce you all  
3 first.

4                   Our first speaker will be Wesley D.  
5 Smith, the Technical Director, Public and  
6 Enterprise Solutions Business Unit of ARINC  
7 Wireless; then Allan Finkelman, Vice President,  
8 Marketing and Business Development of CX2  
9 Technologies; Gregory Sarratt, ARRL, Alabama Radio  
10 Operator, National Association of Amateur Radio;  
11 Jerry Knoblach, Chairman and Chief Executive  
12 Officer of Space Data Corporation; and Brent  
13 Struthers, Senior Director, State Regulatory  
14 Affairs for Neustar, Inc; and, finally, Mac Dearman  
15 of Maximum Access, LLC.

16                   Gentlemen, welcome. We will hear from  
17 all of you first and then ask you some questions.  
18 So let me start with Mr. Smith.

19

20                                   PANEL 5

21

22                   Wesley D. Smith, Technical Director, Public and  
23 Enterprise Solutions Business Unit, ARINC Wireless

24

25                   Good morning, ladies and gentlemen, Madam

1 Chairwoman, honored members of the panel, and  
2 guests, let me express my sincere appreciation for  
3 my invitation to speak today. I'm Wesley Smith,  
4 Technical Director at ARINC, which provides  
5 technology that enables full communications  
6 interoperability among first responders. The  
7 technology is known as AWINS, the ARINC Wireless  
8 Interoperable Network Solutions, which is an  
9 architecture for complete communications  
10 interoperability.

11 AWINS is based on the internet protocol standard  
12 and is installed in both fixed implementations such  
13 as emergency operations centers and mobile versions  
14 such as a mobile command vehicle.

15 I would like to begin my remarks with our  
16 experience supporting the State of Maryland's post  
17 Katrina relief efforts.

18 An after-action analysis followed Hurricane  
19 Isabel and led Anne Arundel County, Maryland, to  
20 purchase a mobile command vehicle to help manage  
21 disasters and other large events. Last summer  
22 AWINS was installed in the new mobile command and  
23 control unit and delivered to the County on August  
24 23rd. Just two weeks later, it was deployed in  
25 support of Hurricane Katrina relief as part of

1 Operation Lifeline.

2 while deployed in Jefferson Parish, MCCU-1  
3 supported communications and coordination for a  
4 series of medical clinics run by the Maryland  
5 Emergency Management Agency team. The team included  
6 resources from 14 Maryland jurisdictions and more  
7 than 100 doctors and nurses from Maryland  
8 hospitals. It was joined in Louisiana by seven  
9 more local jurisdictions.

10 with little to no radio infrastructure in place,  
11 the value of the mobile command vehicle and AWINS  
12 with its powerful communications capabilities was  
13 quickly recognized. The diversity of the team also  
14 meant there was minimal commonality among their  
15 mobile radios. AWINS allowed the team to build  
16 radio coverage and create interoperability among  
17 the team members. MCCU-1 was operational within 45  
18 minutes of arrival at Meadowcrest Hospital.

19 The AWINS technology within MCCU-1 also gave the  
20 MEMA team a number of unique capabilities such as:  
21 Interoperable radio communications among all team  
22 members, direct communication to any radio from a  
23 voice-over IP phone in the MCV, a PSTN phone when  
24 available, or cell phone.

25 Fully functional dispatch stations where

1 dispatchers could create ad hoc talk groups, look  
2 up directions for those in the field, order  
3 supplies, and perform all normal dispatch  
4 functions.

5 The IP-based satellite connection in the MCCU-1  
6 enabled regular phone calls using voice-over IP,  
7 and full motion video conferences took place with  
8 status reports between the MCCU-1 vehicle, the Anne  
9 Arundel Emergency Operations Center, and the MEMA  
10 Emergency Operations Center that was located in  
11 Maryland.

12 The satellite connection also provided inbound  
13 and outbound access to the PSTN, full internet  
14 access, and access to all county computer resources  
15 back home.

16 An internet cafe provided a morale boost by  
17 allowing all the volunteers to call home or send  
18 e-mails to check on family and businesses. During  
19 the 15 days it was operational, the medical team  
20 saw approximately 6,000 patients at the seven  
21 medical clinics they deployed.

22 Keeping in mind that the vehicle had not gone  
23 through acceptance testing and the staff had not  
24 yet been trained, Chief Ron Blackwell from the Anne  
25 Arundel Fire Department summed up MCCU-1's mission

1 and first real test in this manner, and I quote,  
2 "There are always come questions in your mind, will  
3 it do what we've been told it will do when it's  
4 most needed. This unit passed that test with  
5 flying colors."

6 It is from this point of view and with the  
7 lessons learned during this and other missions that  
8 I wish to share five insights for the benefit of  
9 the committee.

10 Number one, operability, during the initial  
11 meeting of this panel, we heard a lot about  
12 operability. Operation Lifeline would not have  
13 been achieved without the ability to create an  
14 operable radio infrastructure. The ability to  
15 quickly fill a gap in the infrastructure when it is  
16 destroyed or disabled is a key success factor. The  
17 mobile nature of the vehicle allowed for its  
18 deployment where it was needed most. The fact that  
19 it is mobile allowed it to be out of harm's way or  
20 moved speedily to a crisis area. MCCU-1 was  
21 specifically with that in mind.

22 Number two, interoperability, the variety of  
23 resources for any mission of this nature assumes  
24 there will be a diverse set of radios. The crunch  
25 on resources also demands that people bring and use

□

1 their own equipment whenever possible. The ability

2 to communicate on demand requires a flexible  
3 standard capable of interconnecting resources on  
4 the fly and one, which does not require exchange of  
5 equipment.

6 Supporting visiting resources such as law  
7 enforcement, national guard, fire and rescue, and  
8 utility companies with disparate equipment  
9 long-term is a prerequisite for scalable recovery.

10 Three, policy, technology is only part of the  
11 answer. Without the ability to properly utilize  
12 technology, first responders will fail in their  
13 mission. As examples, policies must be developed  
14 that support the following: An effective  
15 communications plan with contingencies in case of  
16 failures, rigorous and frequent training and drills  
17 that utilize disaster plans and technology even if  
18 it means turning off parts of your radio systems  
19 once in a while, memorandums of understanding with  
20 other jurisdictions and potential outside  
21 assistance organizations such as utilities,  
22 transportation groups, highway road crews,  
23 predefined and pre-authorized means of allowing  
24 support vendors to enter disaster zones to lend  
25 technical assistance in repairing damaged

□

1 infrastructure.

2 And, of course, there are many more policy  
3 issues, too numerous to list.

4 Number four, standards, the proprietary nature  
5 of much of today's LMR infrastructure directly  
6 hampers interoperability while open standards such  
7 as the internet protocol and voice-over IP allow  
8 the entire world to communicate via the internet.

9 It is these same standards that enabled the  
10 Maryland to provide its powerful communications  
11 capabilities. The robust nature of these standards  
12 means solutions can be built from  
13 commercially-available products. This saves time  
14 in becoming operational, keeps cost low, makes the  
15 system easier to manage, and enables expansion and  
16 adaptation to the mission as required.

17 Fifth, funding, Federal policies such as the 700  
18 MHz rebanding and the adoption of APCO P25 are  
19 positive steps, but we must ask ourselves what can  
20 we do to adjust or amend these initiatives to make  
21 them timely enough to meet the communication  
22 challenges of our first responders face today.

23 The APCO P25 recent adoption of using a gateway  
24 in the interim to link disparate two-way radio  
25 systems is an example of how a long-term initiative

□

1 can be amended to short-term needs. Pairing this  
2 kind of forward thinking with SAFECOM's federal

3 grant guidance that specify gateway requirements  
4 for network-to-network communication accelerates  
5 the implementation of interoperability technology.

6 However, the federal grants intended for public  
7 safety do not adequately address operational cost  
8 for post implementation such as network  
9 connectivity, hardware maintenance, and other Day 2  
10 requirements for, which many jurisdictions do not  
11 currently have budget.

12 In summary, a standards-based approach provides  
13 the means to deliver on the promise of  
14 interoperability. The ability to reach out using  
15 all communications means at hand is the first and  
16 most important requirement for successful disaster  
17 response.

18 Operability among local first responders is the  
19 initial priority with ad hoc interoperability a very  
20 close second requirement for the addition of  
21 outside assistance. For long-term recovery, a  
22 comprehensive plan for sustained interoperability  
23 must be developed.

24 Organizations must practice their communications  
25 response plans regularly. Long-term technical

□

1 initiatives must have an incremental implementation  
2 with appropriate alignment of grant funding.

3 I would like to thank the committee and honored  
4 guests for their time. I appreciate the  
5 opportunity to share our emergency response  
6 experiences.

7

8 Nancy J. Victory, Chair of the Independent Panel  
9 Thank you very much. Mr. Finkelman.

10

11 Allan Finkelman, Vice President, Marketing and  
12 Business Development, CX2 Technologies

13

14 Thank you. My name is Allan Finkelman. I  
15 represent BizCom USA, Inc., which operates under  
16 the trade name, CX2 Technologies.

17 We hold a significant percentage of FCC licenses  
18 in the 220 to 222 MHz frequency bands. More  
19 importantly, we manufacture patented digital data  
20 technology that maximizes the value of the 5  
21 kilohertz very narrowband channels.

22 CX2 appreciates this opportunity to share with  
23 the panel and concerned parties a little  
24 information about this emerging technology. It is  
25 basic communications theory that when various

□

1 communications compete for bandwidth, mundane  
2 information crowds out critical information.

3 Incident responses relative to Hurricane

4 Katrina, 9/11, and other efforts have confirmed  
5 this example of Murphy's Law. I believe that there  
6 is widespread agreement that the answer revolves  
7 around reserving bandwidth for the most critical  
8 information.

9 At the January session of this panel, Kelly  
10 Kirwan of Motorola said there is no one size fits  
11 all solution. CX2 Technologies agrees with that  
12 statement and further contends that there is no  
13 single frequency band that can be a one size fits  
14 all solution.

15 The Federal Communications Commission originally  
16 issued the 220 band to allow the entrepreneur the  
17 opportunity to participate in the wireless industry  
18 and to allow for the development of new narrowband  
19 technologies to create an advanced method of  
20 spectrum efficiency.

21 CX2 Technologies is the only company that has  
22 successfully developed both mobile and fixed data  
23 radios and base station products that operate  
24 within the narrow 5K spacing as the FCC intended.

25 The 220-frequency band is currently

□

1 underutilized. This unencumbered and available  
2 spectrum has excellent potential application for  
3 properly targeted use by the Department of Homeland

4 Security as part of the National Emergency Response  
5 Plan.

6 CX2's data technology that maximizes efficiency  
7 within the 5K channels creates a potential usage  
8 profile not previously possible. Other enabling  
9 technology for the band requires minimally two and  
10 typically three contiguous channels while the CX2  
11 Technologies operate within a single channel.

12 The currently low usage within this band coupled  
13 with a data protocol that guarantees transmission  
14 slots for end-point units also guarantees that  
15 interference issues typical in broadband  
16 applications can be avoided.

17 A strong benefit to utilizing 220 MHz  
18 technologies is the spectrum relief that can be  
19 realized in other heavily used frequency bands.  
20 Data-only applications using small message sizes  
21 would not compete for bandwidth with law  
22 enforcement, fire rescue, and other responders with  
23 heavy requirements for two-way voice, paging, or  
24 cellular networks.

25 This would aid in reducing congestion on those

□

1 networks while allowing clean delivery within the  
2 220 MHz space. The creation of a national sensor  
3 network is an excellent example of an ideal  
4 application for narrowband technology. Messages

5 of 50 bytes can be queried at a rate of 330 end  
6 points per minute per channel. The system can then  
7 service 4,950 end points per channel per location  
8 while polling each end point every 15 minutes.

9 The majority of these end points would most  
10 likely be fixed, the sensors, weather, chemical,  
11 radiological, et cetera, but mobile end points  
12 could also be used with automatic vehicle location  
13 attached if desired.

14 For instance, in the response effort for  
15 Katrina, boats were brought in and deployed to help  
16 in the rescue effort. In ten minutes or less, a  
17 GPS-equipped CX2 data radio and antenna could be  
18 installed and powered by the boats' 12 volt  
19 battery, thus providing AVL data and a better means  
20 of tracking resources.

21 A mobile base station could also be deployed in  
22 the event that existing tower sites were down. A  
23 220 MHz emergency base station would have a  
24 substantially larger coverage footprint and better  
25 promulgation characteristics than a 700 MHz base

□

1 station.

2 That translates to better reliability in hilly,  
3 forested areas and urban canyons alike.

4 Let me describe how the CX2 system for wireless

5 data delivery works. Using sensor technology as an  
6 example, CX2 can deploy a national sensor network  
7 over its nationwide or regional 220 MHz frequencies  
8 in which sensor data is sent to local site servers  
9 located in hardened facilities.

10 A single tower site can provide on average a  
11 1200-square-mile coverage footprint. A single  
12 local site server or LSS can manage and distribute  
13 data from at least 24 tower locations, thus that  
14 one server is managing roughly 30,000 square miles  
15 of sensor installations.

16 The LSS then sends the data to a gateway from  
17 which it can be distributed in any way necessary,  
18 thus meeting interoperability requirements. The  
19 network administrator can reroute sensor data to  
20 accommodate any response scenario.

21 This function can be performed independent of  
22 voice and/or video functions provider over other  
23 spectrum. Public officials and agencies can  
24 coordinate the information received over this  
25 network with other services, thus producing a

□

1 coordinated emergency response effort.

2 It has always been a part of CX2's vision to use  
3 this technology within the framework of incident  
4 response. We have developed various software  
5 applications that are both stand alone and capable

6 of being integrated into our software-driven data  
7 radios. That integration capability certainly  
8 includes third party products as well.

9 Our software applications, some of which are in  
10 use and others in earlier stage development, are  
11 designed for use in the incident response vehicles,  
12 in emergency operation centers, and for medical  
13 response, tying in hospitals and ambulances.

14 The most mature of these applications is an  
15 in-vehicle GIS mobile mapping solution known as  
16 GeoCommand. We ran a nationwide survey of 9,000  
17 first responders at chief or equivalent levels and  
18 discovered that 80 percent of respondents did not  
19 have in-vehicle GIS applications. Seventy-three  
20 percent expected that such a capability would be  
21 extremely beneficial to their operations.

22 GeoCommand helps responders know where to go and  
23 how to get there with the GIS mapping. It improves  
24 spatial awareness with access to aerial photograph.  
25 It improves site intelligence with embedded

□

1 pre-plans, site photos, blueprints, floor plans and  
2 related documents.

3 It can also increase response effectiveness and  
4 execution confidence with embedded emergency  
5 response manuals. GeoCommand is not dependent upon

6 wireless connectivity. It can act as a stand-alone  
7 application or, for better functionality, be  
8 integrated with CX2's or others AVL or  
9 computer-aided dispatch products.

10 CX2 is proud of this application, but I actually  
11 came here to speak to you primarily about the  
12 viability of the 220 MHz frequency band. To  
13 summarize the technical advantages that can be  
14 accessed, due to the promulgation characteristics  
15 of radio spectrum at 220 MHz, CX2's wireless data  
16 networks are constructed with far fewer sites than  
17 other two-way wireless communications systems.

18 CX2's most significant advantages over other  
19 spectrum technologies are the dramatically lower  
20 capital costs needed to deploy network  
21 infrastructure and the significantly lower  
22 operating costs of providing service.

23 CX2's over-the-air protocol is a point to  
24 multipoint design resulting in the efficient  
25 servicing of thousands of end points.

□

1 The CX2 protocol guarantees transmission slots  
2 for terminal units while still maintaining reserve  
3 capacity for event-driven or user-initiated  
4 communication. Thus, interference is virtually  
5 eliminated, and transmission efficiency can reach  
6 higher reliability levels both within the 220 space

7 and in the broadband space.

8 CX2 has demonstrated commitment to the  
9 advancement to narrowband technologies and the  
10 dedication and vision to apply a new technology  
11 concept in real world environments to achieve  
12 public safety communications interoperability.

13 This data solution will not compete with  
14 consumer users. This spectrum is currently  
15 available and unencumbered. The cost efficiencies  
16 suggest that CX2's 220 MHz spectrally efficient  
17 technologies presents a viable solution and merits  
18 serious consideration. Thank you very much.

19

20 Nancy J. Victory, Chair of the Independent Panel

21 Thank you. Mr. Sarratt.

22

23 Gregory A. Sarratt, Alabama Section Manager, ARRL

24 The National Association for Amateur Radio

25

□

1 Good morning. My name is Greg Sarratt. I am an  
2 amateur or HAM radio operator. My FCC-issued call  
3 sign is W4OZK. I have been an amateur or HAM  
4 radio operator for over 22 years and hold the  
5 highest class FCC license.

6 I am the Alabama State Manager for the ARRL, the

7 National Association of Amateur Radio.

8 Thank you for allowing me to speak today about  
9 my experiences in the Hurricane Katrina relief  
10 effort.

11 During Hurricane Katrina, amateur radio provided  
12 volunteer operators to support many agencies such  
13 as Emergency Management, National Weather Service,  
14 Hurricane Watch, and the American Red Cross. This  
15 is business as usual for many amateur radio  
16 operators in the Amateur Radio Emergency Service or  
17 ARES nationwide.

18 After Katrina, amateur or HAM radio provided  
19 many more volunteer operators to support an even  
20 larger host of served agencies that requested our  
21 services. The ARRL coordinated hundreds of amateur  
22 radio operators who traveled to the devastated area  
23 and provided critical communications capabilities.  
24 This work continued for many weeks.

25 Katrina almost wiped out communications in

□

1 Southern Mississippi. Both public and amateur  
2 communications were decimated. Local communication  
3 workers and volunteer amateur radio operators  
4 suffering their own personal obstacles were greatly  
5 reduced in numbers, equipment, and capacity during  
6 the storm.

7 I arrived on the afternoon of August 30th in

8 Mobile, Alabama, to set up and provide  
9 communications for a Southern Baptist kitchen site  
10 and a joint Amateur Radio Emergency Services or  
11 ARES Southern Baptist communications role.

12 I was called by the ARRL on September 1st and  
13 was asked to establish relief communications for  
14 the American Red Cross. The American Red Cross  
15 quickly realized that they had no communications  
16 into the disaster area and requested an immediate  
17 force of at least 700 amateurs to go into the  
18 disaster area in locations across Alabama and  
19 Mississippi.

20 The Louisiana disaster area was a secondary task  
21 for us and handled by the amateurs in that state,  
22 but we did provide them with a few amateurs near  
23 the end.

24 On September 3rd, I arrived at the American Red  
25 Cross disaster relief headquarters in Montgomery,

□

1 Alabama, and immediately established an amateur  
2 radio operations post in this center. The  
3 Montgomery Amateur Radio Club was instrumental in  
4 providing a radio station and local support  
5 throughout this event.

6 The next day we began a 37-day effort that would  
7 ultimately result in over 200 amateurs or HAM

8 radio operators from 35 states and Canada being  
9 processed and deployed to the devastating region  
10 through the Montgomery center. Amateurs were  
11 deployed to multiple Mississippi counties and towns  
12 to set up at kitchens, shelters, emergency  
13 operations centers, distribution locations,  
14 warehouses, and various command and control  
15 centers.

16 The effectiveness of amateur radio to  
17 re-establish communications systems with equipment  
18 they brought in, much of it owned by these  
19 volunteers, and quickly building complete systems  
20 from scratch was tremendous.

21 Amateur radio operators themselves were part of  
22 the solution providing experience communicators to  
23 replace and supplement local communications public  
24 service personnel in the devastated area.

25 These systems of equipment operators were very

□

1 effective, not only for amateur purposes, but for  
2 Emergency Management, Red Cross, Southern Baptist,  
3 Salvation Army, and many other organizations. In  
4 each town we set up a high frequency or HF radio  
5 station to communicate out of the area to  
6 Montgomery and the outside world.

7 We also set up a communications network  
8 connecting every Red Cross facility in a town on a

9 local short-range radio frequency. Our network  
10 included fixed and mobile disaster vehicle  
11 stations.

12 Hundreds of amateur radio operators made up the  
13 largest amateur radio emergency service army in  
14 history to provide critical communications support.  
15 Our army included amateurs or HAM's of all  
16 genders, ages, types, backgrounds.

17 Many worked from home supporting field  
18 operations, and many others were field deployed in  
19 the devastated region. When needed, amateurs  
20 provided many service in addition to  
21 communications, working in -- working and living in  
22 terrible conditions, contending with heat, bugs,  
23 ants, and, in many cases, much worse.

24 We deployed several hundred thousand dollars  
25 worth of equipment and resources to the area.

□

1 Individual amateurs and dozens of amateur radio  
2 manufacturers donated thousands of radio equipment  
3 and resources. Several amateur-owned,  
4 self-contained communications vans and vehicles  
5 were effectively utilized in the disaster area.

6 Amateur radio brings a wealth of resources to  
7 the public service and emergency communications  
8 table. Most amateurs possess a broad range of

9 communications and technical skills outside of  
10 amateur radio, thus creating interoperability at  
11 both the systems and operation levels.

12 Many amateurs are familiar with emergency  
13 management, public service and Red Cross  
14 communications, practices and equipment. Amateurs  
15 practice many of their communications skills on a  
16 daily or even weekly basis. They bring the ability  
17 to set up communications systems quickly and then  
18 effectively communicate with them.

19 Amateur radio operators provide technical skills  
20 in addition to communications. During the relief  
21 effort, technical knowledge of amateurs was  
22 thoroughly utilized. Amateurs were repairing EMA  
23 repairs, radios, antennas, generators, forklifts,  
24 telephone systems, and a whole host of electronic  
25 atoms.

□

1 The most important feature that amateur radio  
2 brings to the emergency communications and disaster  
3 is interoperability. You may have heard of radio,  
4 amateur radio, described as old technology.

5 That's not really true. We use state of the art  
6 digital signal processing, surface mount  
7 construction, advanced software and hardware  
8 technology, but our newest equipment can  
9 communicate with our oldest equipment.

10 We use many bands throughout the frequency  
11 spectrum supporting short, medium, and long term --  
12 long-range communications. The individual amateur  
13 radio operator is a part of the interoperable  
14 system.

15 Amateurs demonstrated their adaptability by  
16 communicating successful with a multitude of  
17 amateur, commercial, public service, EMA,  
18 Salvation, and Red Cross radio systems and  
19 personnel. I am also proud to mention that amateur  
20 radio emergency service received favorable mentions  
21 in the what went right section of the Federal  
22 Response to Hurricane Katrina, Lessons Learned  
23 Report, and we also gained praise in the efforts of  
24 a Failure of Initiative Hurricane Report generated  
25 by the Select Bipartisan Committee.

□

1 Amateur radio has had positive mentions by every  
2 panel during this two-day session, and, finally,  
3 our interface and working relationship with the FCC  
4 personnel has contributed to our success.

5 There are many ways to improve our disaster  
6 preparedness. We have conducted several lessons  
7 learned meetings since Katrina and certainly have  
8 learned many lessons from this event. But ARRL and  
9 amateur radio will continue to prepare, train,

10 practice, test ourselves for the next event.

11 Public service is a large component of the  
12 charter of the amateur radio service. We support  
13 hundreds of public service activities across the  
14 United States each year. There should be a  
15 permanent amateur radio station built into federal,  
16 state, and local emergency management operations  
17 centers, select public service centers, Red Cross  
18 chapters, and many other served agencies. Local  
19 teams of amateurs would support these operations.

20 ARRL has greatly increased emphasis on training  
21 over the past five years, and this has paid off;  
22 but we need additional assets to provide enhanced  
23 training for our operators.

24 ARRL must set up additional training in  
25 management of a special core of emergency first

□

1 responder amateur or HAM radio operators that can  
2 immediately go into the disaster area and set up  
3 vital communications systems. The ARRL and amateur  
4 radio must raise the awareness of amateur radio  
5 within the government agencies, public service,  
6 emergency management, and the first responder  
7 community such as police, fire fighters, and  
8 emergency medical personnel. This awareness will  
9 let the first responder community know what amateur  
10 radio can do for them.

11 The ARRL needs a nationally-recognized  
12 credential system to be effective when disaster  
13 strikes, possibly an FCC credential issued to each  
14 responder. An FCC credential makes sense because  
15 the amateur radio service is part of the wireless  
16 telecommunications bureau and licensed by the FCC.  
17 This credential would enable amateurs to quickly  
18 and effectively go into a disaster area and  
19 immediately be accepted by emergency management and  
20 first responders.

21 Some recommendations I believe the panel should  
22 consider: The FCC and ARRL work together to issue  
23 FCC credentials to the ARRL for amateur radio  
24 responders. The FCC and the ARRL should be key  
25 partners in the amateur awareness program for

□

1 multiple government agencies such as FEMA, state  
2 and local emergency management, and first responder  
3 community.

4 The FCC and ARRL should continue working  
5 together on critical frequency spectrum protection  
6 and interface of ordinance issues.

7 In conclusion, the disasters of 2005 have proven  
8 the worth of amateur radio service and its selfless  
9 cadre of operators. We were tested as never  
10 before.

11 while we wish the summer had been uneventful and  
12 our annual field day preparedness exercise won't  
13 happen again until next June, we must be vigilant  
14 and recognize, to be fully prepared, and we must  
15 assume that the next big one is just around the  
16 corner.

17 During this event, my experience affirm that  
18 many HAM or amateur radio operators are much more  
19 than hobbyists. I saw amateurs sacrifice,  
20 contribute, and succeed in providing many weeks of  
21 critical communications and additional service to  
22 meet dynamic and changing unique needs.

23 Amateurs created interoperable systems where  
24 there were none and saved lives as a result.  
25 Moreover, they brought the love of public service,

□

1 a variety of communications, contesting, training,  
2 and public service skills and, most of all, by  
3 applying the amateur can-do spirit to help people  
4 in need. This was indeed an example of our  
5 favorite phrase, when all else fails, amateur  
6 radio.

7 It was my pleasure meeting and working with  
8 hundreds of amateur radio operators and public  
9 service personnel during this event. I am proud to  
10 have been a part of this effort. Thank you.  
11

12 Nancy J. Victory, Chair of the Independent  
13 Panel Thank you very much. Mr.  
14 Knoblach.

15

16 Jerry Knoblach, Chairman and Chief Executive  
17 Officer

18 Space Data Corporation

19

20 Good morning, Madam Chairperson and members of  
21 the esteemed panel. My name is Jerry Knoblach, and  
22 I am the chairman and CEO of Space Data  
23 Corporation; and I want to thank you sincerely for  
24 the opportunity to present testimony on how Space  
25 Data's technology could overcome problems like

□

1 those produced by Katrina's devastation.

2 Space Data has an inexpensive and very well  
3 proven wireless solution that solves three primary  
4 problems that happen during disasters, availability  
5 of communications, the range of communications,  
6 interoperability of communications. This  
7 innovative solution can provide communications to  
8 first responders when terrestrial networks cannot.

9 Space Data was founded nearly nine years ago  
10 with a simple idea. It was to provide wireless  
11 communications by flying base stations high above

12 the earth using free-floating weather balloons.  
13 Our solution builds upon nearly a century of  
14 successful weather balloon launches by the National  
15 weather Service, and today Space Data has a  
16 commercial network deployed in the 900 MHz narrow  
17 band PCS band covering 100 percent of Texas and  
18 Oklahoma and the surrounding areas that is  
19 compatible with the two-way pagers and telemetry  
20 devices that Vince Kelly and Bruce Deer from our  
21 roaming partner, Skytel, talked about yesterday.

22 In addition, we provide telemetry services to  
23 monitor critical infrastructure such as oil and gas  
24 wells and pipelines, and we are moving into  
25 cellular and broadband offerings with trials in

□

1 North Dakota with devices such as this.

2 We have made this system work by developing a  
3 special radio payload called the SkySite Platform.  
4 The SkySite Platform consists of basically a  
5 wireless base station, but weighs less than six  
6 pounds. One person can launch a SkySite Platform  
7 and have it on station at 65,000 feet in less than  
8 two hours, effectively creating a tower over 12  
9 miles in altitude.

10 Each payload covers about 12 to 24 hours of  
11 coverage before safely parachuting back to earth  
12 for being recovered and refurbished.

13 Today we have completed over 7,000 launches as  
14 part of our commercial operations in the last 18  
15 months, and this pay load design has aggregated a  
16 total of over eight flight years on station in the  
17 stratosphere.

18 Over the past two years, the Air Force Space  
19 Command has become interested in what it calls near  
20 space, the area of the atmosphere between 65,000  
21 and 325,000 feet. This altitude is too high for  
22 most aircraft and too low for satellites, but ideal  
23 for our Skysite Platforms.

24 Space Command asked us to participate in their  
25 Combat Skysat program to prove the merits of near

□

1 space. Our flight of a radio platform at 70,000  
2 feet was a very eye-opening experience to the  
3 military participants.

4 Suddenly, a hand-held radio exactly like this  
5 one that our troops use in Iraq that has a normal  
6 range of five to ten miles was talking over 400  
7 miles at one-fifth the transmit power, effectively  
8 extending its battery life.

9 Building upon this success, Space Command  
10 sponsored Space Data's participation in JEFX 2006,  
11 a multi-service exercise that brings new technology  
12 directly to the war fighter for first-hand

13 evaluation. Traditionally, participation in this  
14 exercise had been a precursor for deployment into  
15 operational theaters.

16 Last year, we spoke with a soldier who was  
17 supporting supply convoys in Iraq that had just  
18 returned stateside. He said, "There's nothing  
19 scarier than being in the middle of the desert with  
20 a way to communicate."

21 Tragically, there are echoes of that battlefield  
22 assessment in the news reports from Katrina where  
23 first responders faced no way to call for medical  
24 assistance, police support, fire support, or even  
25 communicate among themselves.

□

1 Terrestrial networks usually do not survive  
2 major disasters intact as we have seen with  
3 Katrina. Space Data's solution -- has a very large  
4 coverage footprint. Our SkySite Platforms can be  
5 launched from well outside the affected area.  
6 Since they fly much higher than storms or fires,  
7 they provide communications during the disaster  
8 itself. This gives first responders the ability to  
9 be more effective in their rescue operations since  
10 our SkySite link supports the equipment they  
11 already use every single day.

12 Space Data's SkySite system can be held in  
13 reserve and deployed on short notice when needed.

14 For example, national guard units could deploy the  
15 system when they are moving in to support  
16 post-disaster relief efforts no matter where the  
17 disaster may be. In fact, ground station equipment  
18 and enough Skysite Platforms for 24 hours can  
19 literally fit in carry-on luggage on an airplane.

20 All that is needed at the launch site is an open  
21 field and a cylinder of helium or hydrogen. If  
22 the launch operation area of interest shifts, the  
23 communication network can be easily shifted also.

24 The Skysite system can also expand quickly to  
25 meet additional capacity. Adding more

□

1 communications channels is as simple as launching  
2 more pay loads. It is noteworthy to note that  
3 taking advantage of miniaturization and an  
4 additional nine months of engineering, our current  
5 pay load now has six times the capacity of the  
6 original Combat SkySat proof-of-concept pay load.  
7 It costs a fraction of the amount and now extends  
8 communications over 600 miles.

9 During Katrina, Space Data's network operating  
10 without interruption over our entire coverage  
11 footprint including much of Louisiana. Even our  
12 launch operations out of Opelousas, Louisiana,  
13 continued with only a slight launch schedule

14 adjustment during the worst of Hurricane Katrina.

15 Just like a weather balloon, our technology is  
16 designed to be resistant to stormy conditions. Our  
17 communications system continued through the worst  
18 of the hurricane and on into the aftermath while  
19 traditional networks were taken out of commission.

20 With rampant news reports of communication  
21 outages, Space Data tried to support Katrina  
22 recovery efforts with our still operational data  
23 system. However, we found no takers.

24 In addition to near-immediate communications  
25 coverage that can be deployed during an emergency,

□

1 there is another urgent and compelling need that  
2 Space Data's SkySite Platforms can solve --  
3 ensuring the interoperability of incompatible radio  
4 networks. A conventional radio repeater  
5 rebroadcasts transmission from a single network so  
6 that radios such as this one used by police and  
7 fire fighters and federal officials can communicate  
8 with other people in their own organization.

9 However, these different groups are often unable  
10 to talk or coordinate relief efforts with other  
11 people in other organizations that have  
12 incompatible equipment. A paramedic or national  
13 guardsman can be 100 yards from each other and yet  
14 unable to communicate.

15 A second type of SkySite Platform called the  
16 bridging repeat provides a solution. It carries  
17 two or more radio transceivers with different  
18 protocols or frequencies to bridge two  
19 communications networks. With this payload,  
20 different groups on the ground can tune to a  
21 channel already on their radios and have their  
22 communications rebroadcast into another network.  
23 This could allow police to talk to fire fighters or  
24 FEMA to talk to local law enforcement, and this can  
25 be put on station a couple of hours after disaster

□

1 occurs.

2 This bridging repeater concept was also  
3 demonstrated at the US Air Force as part of the  
4 Combat SkySat Program. It allowed ground troops  
5 using hand-held tactical FM radios just like this  
6 one to communicate directly with pilots on A-10 and  
7 F-16 aircraft that were using AM radios.

8 We read with great interest the  
9 recently-released White House report on the Federal  
10 Response to Katrina and, in particular, its  
11 recommendation for a rapidly deployable  
12 communication system for DHS. Space Data's  
13 technology is ideally suited for such a system with  
14 its provisions for launching quickly and virtually

15 at any location within 90 minutes covering an area  
16 more than 400 miles wide.

17 We provide the reach-back to large headquarter  
18 units and connectivity among federal, state, and  
19 local authorities as cited in the report.

20 Space Data's SkySite system is also  
21 extraordinarily a cost-effective means of providing  
22 wireless communications during disaster. Radio  
23 repeaters can be fit with GPS tracking and  
24 recovered and reused multiple times. On our  
25 commercial network, we get about 87 percent of them

□

1 back.

2 One SkySite Platform can cover hundreds of miles  
3 and be easily deployed. Moreover, first responders  
4 will no longer be required to maintain and build  
5 expensive terrestrial networks with extra capacity  
6 just for emergencies that may never occur.

7 Since the SkySite Platforms are compatible with  
8 existing user equipment, all the cost associated  
9 with purchasing, distributing, maintaining, and  
10 training personnel on new user equipment is  
11 completely eliminated.

12 In summary, Space Data can solve the three major  
13 communications problems faced by first responders  
14 -- availability, range of communication, and  
15 interoperability. We can do this by offering

16 responders a simple, cost-effective solution that  
17 is quickly deployed when and where it is needed,  
18 removing a need to maintain expensive wireless  
19 infrastructure in remote areas. No new equipment  
20 is required by the users on the ground. They keep  
21 using the same radios that they've always used, but  
22 those radios now have significantly more  
23 effectiveness.

24 Like most Americans, we at Space Data see  
25 government agencies at all levels -- we want to see

□

1 them have the best tools available to respond to  
2 crises such as Katrina. We offer a solution that  
3 can fill in coverage gaps created by the storm's  
4 destruction.

5 I ask the panel to encourage the FCC to support  
6 the advancement and use of technology such as Space  
7 Data's before the next emergency occurs.  
8 Specifically, the FCC should have an automatic  
9 waiver process for public safety spectrum that is  
10 triggered by a Presidential declaration for public  
11 safety spectrum so a solution like Space Data's  
12 could be rapidly deployed in the event of  
13 emergency.

14 In addition to solving these spectrum issues,  
15 the Commission can help by pressing DHS to examine

16 balloon-borne solutions and have the necessary  
17 inventory and emergency service plans in place for  
18 federal agencies in advance of the next hurricane  
19 season.

20 Finally, commercial wireless service is the most  
21 universal form of communications used by public  
22 safety and citizens. Therefore, it is imperative  
23 that commercial networks are up and operating as  
24 quickly as possible following disaster.

25 Space Data's Skysite Platforms can provide

□

1 commercial carriers with the immediate solution to  
2 allow them to service those existing hand sets  
3 after their terrestrial network has been wiped out.  
4 Carriers should be encouraged by the FCC to examine  
5 solutions such as ours and be prepared to deploy  
6 them in the event of the next disaster.

7 Madam Chairperson, members of the panel, thank  
8 you for allowing me to speak with you today. It is  
9 with great that we do our work at Space Data. We  
10 look forward to playing a key role in helping save  
11 lives through better communications in future  
12 emergencies our country may face.

13 I would be happy to provide you with any  
14 additional information you need to fulfill your  
15 tasks.

16

17 Nancy J. Victory, Chair of the Independent Panel  
18 Thank you very much. Mr. Struthers.

19

20 Brent Struthers, Senior Director  
21 State Regulatory Affairs, NeuStar, Inc.

22

23 Good morning or, I guess, good afternoon. Thank  
24 you to the panel and Madam Chairwoman for allowing  
25 me to speak today.

□

1 NeuStar operates the National Number Portability  
2 data base. If you're not tremendously familiar  
3 with portability, it is what you do when you want  
4 to change service providers and move from one  
5 wireless phone company to another or one wireline  
6 phone company to another and take your phone number  
7 with you.

8 How does that relate to disaster recovery?

9 That's a pretty good question.

10 Local number portability is essentially moving a  
11 telephone number, thereby rerouting the traffic  
12 that is bound in that telephone number from one  
13 telephone company switch to another. It could be  
14 between multiple telephone companies. It could be  
15 within the same telephone company, just a different  
16 geographical location.

17 when the disaster disrupts a telephone network,  
18 specifically in the case that I'm talking about,  
19 taking out a telephone switch -- it doesn't happen  
20 that often because they tend to be in bunker-like  
21 buildings with no windows and generally not  
22 affected by high winds, but these and other things  
23 can definitely affect a telephone switch.

24 And when it does happen, telephone service is  
25 disrupted. You want to get traffic that is going

□

1 to be routed to that switch off of that switch and  
2 on to another network that is still functioning.  
3 Local number portability is data base technology.  
4 NeuStar operates the data base, the single data  
5 base, the master data base, for all of North  
6 America.

7 I'm going to step back a little bit. There is a  
8 lot of disaster recovery experts in this room. I'm  
9 not one of them. NeuStar does one thing and does  
10 one thing very well. We know how to take numbers  
11 and port them between switches.

12 How does that relate to disaster recovery?

13 Well, we found out after 9-11. After 9-11,  
14 switches were taken down within the World Trade  
15 Center, and Verizon had a very major switching  
16 center next to the World Trade Center and near the  
17 World Trade Center Complex that got taken down.

18 we went in there, and we said, how can we help?

19 we can take numbers off of those switches and

20 put them onto other switches.

21 what does that mean?

22 That means we can make sure that the traffic

23 that was going to go into those telecom switches

24 that have now been destroyed could be rerouted to

25 telecom switches elsewhere in the network. It

□

1 doesn't help unless you have a facility hanging

2 off the other telephone switch in which you can

3 receive calls.

4 In other words, major government agencies, big

5 companies may have an alternate facility when they

6 send people in the case of a disaster, or maybe

7 they send employees home to take phone calls from

8 there. You've got to have an alternate facility,

9 but if you have that alternate facility, we can

10 reroute that traffic using your telephone number to

11 another switch, allowing you to receive and send

12 calls from your new location on your same telephone

13 number that you have always used.

14 we did in excess of 60,000 numbers after 9-11.

15 we took them and we ported them out of downtown

16 Manhattan to New Jersey and Connecticut. There are

17 some limitations with number portability. We are

18 required by FCC rules to port numbers only within a  
19 small geographic area. We call it a rate center.

20 Think of it like a zip code. There's lots of  
21 centers in Manhattan. I don't know exactly how  
22 many.

23 In order to get traffic outside of the  
24 disaster-affected area, we had to get an FCC  
25 waiver; and we did. The FCC acted pretty quickly

□

1 to give us that waiver when we asked.

2 we also worked and coordinated with the State  
3 Public Utility Commission. We also absolutely,  
4 positively had to work with carriers that owned  
5 those numbers. We at Neustar cannot take a  
6 telephone number and move it around with the  
7 carrier. The carrier is the one that tells us to  
8 do that. We can move the numbers, but they need to  
9 give us permission to do that. It doesn't help  
10 that their customer doesn't know.

11 So we've got to work with the carriers to do it.  
12 So we closely coordinate, and after we're done, we  
13 take those numbers; and we move them back since it  
14 is a temporary solution.

15 Let me talk a little bit about Katrina. It's  
16 the second time we have had to use number  
17 portability for disaster recovery. It worked  
18 pretty well after 9-11. We wanted to see what

19 happened after Katrina.

20 After Katrina, I think Bell South had 33 central  
21 offices that were taken out of service with the  
22 flooding in Katrina. That little minor disaster  
23 back in November that kind of helped me to see what  
24 happens to telephone equipment when it gets hit by  
25 water.

□

1 I took my wife for our tenth anniversary to a  
2 nice restaurant, and after the dinner, I went into  
3 the rest room to wash my hands; and my cell phone  
4 met the sink and got a little wet. That phone  
5 equipment didn't work very well for very long after  
6 that.

7 That's the exact same thing that happens to a  
8 telephone switch and other phone equipment when  
9 it's introduced to water. Telephone equipment  
10 likes climate control for the most part. Flooding  
11 does not equate to climate control.

12 So all these telephone switches from Bell South  
13 and the other carriers, including the wireless  
14 carriers, what they call home location registers,  
15 and other things were taken out of service.

16 what do you do?

17 what we did is we went to these carriers, and we  
18 said, we can move numbers off of your switches; and

19 we can get that traffic rerouting to an alternate  
20 location.

21 After Katrina, we rerouted approximately 300  
22 numbers, just a little bit over -- excuse me --  
23 300,000 numbers to outside of New Orleans, mostly  
24 to the Houston area. Most of those numbers were  
25 wireless. We got service up and running to all the

□

1 people that were served by those telephone numbers  
2 fairly quickly.

3 From the time Katrina made landfall, it took us  
4 five to six days to get those 300,000 telephone  
5 numbers back up in service. Now, as you will see  
6 on the next -- when I talk about our trial in New  
7 York City, most of that time was related to the  
8 planning involved in finding which numbers needed  
9 to be moved and where they needed to be moved to  
10 and then putting all that information into our data  
11 base to allow us to move the numbers properly.

12 Two points I really need to make here -- this  
13 solution is not an end all, be all. It's limited  
14 to where a switch is taken down. If a switch is  
15 still operational, carriers have other options to  
16 use. They can use remote call forwarding. They  
17 can use other things to move traffic around and  
18 reroute traffic, but when the switch is taken down,  
19 number portability is probably the easiest and

20 perhaps the only way you can move traffic around.

21 This is a temporary solution. If a customer  
22 moves or a carrier moves somebody from New Orleans  
23 to Houston and that person decides to stay in  
24 Houston, they're not going to get to keep their New  
25 Orleans in Houston for the rest of time. We're

□

1 going to take that number, and we're going to put  
2 it back within probably about six months. Most of  
3 the Katrina numbers were ported back by the end of  
4 November.

5 We recently finished a trial in New York City,  
6 in downtown Manhattan, in cooperation with the New  
7 York Public Service Commission and Time Warner  
8 Telecom. The difference between what we did in  
9 this trial and what we did after 9-11 and Hurricane  
10 Katrina is really disaster recovery compared with  
11 -- now we're looking at emergency planning.

12 This is something new we're doing in order to  
13 improve the use of portability as a disaster  
14 recovery mechanism.

15 And what do I mean by emergency planning?

16

17 Well, in essence, we're taking that time frame  
18 that's involved in inputting all that information  
19 into our data base that says which numbers need to

20 be ported and where do they need to be ported, and  
21 we're taking all that; and we're going to do it up  
22 front before a disaster ever occurs.

23 And then when the disaster hits, all we need to  
24 know is the carrier has called us and said, we have  
25 a disaster; we need you to move our numbers and

□

1 reroute our traffic. And we go ahead and do it.  
2 We don't have to put in new routes. We don't have  
3 to change the numbers. We don't have to collect  
4 all the information from the carrier.

5 So what we did in New York City in downtown  
6 Manhattan was we came up with a mock disaster.  
7 Time Warner Telecom during a certain week -- and we  
8 spread it out for seven days. I know you don't  
9 always get that nice notice on disasters, but we  
10 had to do it for the trial.

11 Within that seven-day period, Time Warner  
12 Telecom could call us at any point and say, we've  
13 had a disaster. What we did up front, though, is  
14 we took two plans. We said, let's assume this is a  
15 localized disaster. If it's a localized disaster,  
16 all we have to do is move your traffic outside of  
17 Manhattan, and we can do that. We can keep it  
18 within New York State, but move it outside of  
19 Manhattan.

20 Let's assume also that you've got a regionalized

21 disaster. Okay. So we've got to now move traffic  
22 outside of Manhattan down to Tampa, Florida -- was  
23 the location we moved traffic to.

24 So we've got a localized and a regionalized  
25 disaster -- two different plans. We can have as

□

1 many plans as you could think of, but we came up  
2 with two for the trial.

3 During that week, Time Warner Telecom called us  
4 and said, we've had our disaster; please implement  
5 our plan.

6 We had already done all our data entry, and all  
7 we did was we took the numbers and ported them. We  
8 ported the numbers. Time Warner Telecom did all of  
9 their call testing to make sure that the correct  
10 caller ID was being displayed when calls were made,  
11 that calls were going through, that 911 would work.

12 We did all the call testing, and then assuming  
13 the disaster was over and all telecommunications  
14 equipment was back in service, we ported the  
15 numbers back. That took us about half an hour,  
16 going from five to six days after Katrina to half  
17 an hour with this trial.

18 Now, given, the trial was roughly 102 numbers.  
19 So there's a scale issue there, but the real point  
20 is, if we get 300,000 numbers, it's a lot quicker

21 to do them if we have all that information up  
22 front. We're looking for more trials. We would  
23 like to continue to try and prove this and perfect  
24 this solution.

25 So we're working with state commissions and

□

1 carriers to try and do more. So we may have more  
2 information coming out. There's some information  
3 on our web site about the New York PSC trial.

4 The New York PSC put out a press release that I  
5 put on the table as well and handed out if you  
6 would like to have any information about that, and  
7 I will be happy to answer any questions about what  
8 we are doing; but I think the main message here is  
9 that number portability was not an option that  
10 people considered for disaster recovery up until  
11 probably six or seven years ago when it was put  
12 into play.

13

14 Nancy J. Victory, Chair of the Independent Panel

15 Thank you very much. Mr. Dearman.

16

17 Mac Dearman, Mississippi Public Broadcasting

18

19 Yes. Thank you. I would like to thank the  
20 Katrina review board first for the opportunity to  
21 speak here this morning. I'm not here to sell

22 anything. I'm just here to tell y'all like I saw  
23 it, like I see it today as I just left Bay St.  
24 Louis two weeks ago, some of the things that we did  
25 that were really good, some of the things we did

□

1 that were not so good, and mainly the things I see  
2 that could actually make a humongous difference the  
3 next time around because the truth of the matter is  
4 this. We do know it's not a fact of if, it is a  
5 fact of when this is going to happen again maybe on  
6 a grander scale.

7 I personally worked in four or five states this  
8 year covering three hurricanes. I'm a native of  
9 Louisiana, been there my entire life. That's, I  
10 guess, partially due -- where my Southern accent  
11 comes from.

12 So I'm going to ask y'all to bear with me. If  
13 you think that's what I'm saying, it is. So y'all  
14 just pay close attention.

15 Once again, I'm not here to sell anything. If  
16 I'm going to try to sell anything here this  
17 morning, it's going to be that we need the right  
18 spectrum to do the right job. You know, there are  
19 lots of things that have taken place in the last  
20 six months that I feel are leaps and bounds  
21 preparing us for the next time that we have a

22 disaster of this magnitude.

23 I'm going to start out this story -- and I'm not  
24 going to keep y'all long. I'm a former pastor. I  
25 pastored for 12 years, and I can preach to the

□

1 choir. I feel like y'all are the choir. I don't  
2 feel like I'm going to tell y'all anything new that  
3 y'all haven't already heard in the last couple of  
4 days.

5 So y'all just bear with me, and I'm going to  
6 make this short and sweet. You know, we started in  
7 North Louisiana just on a whim. My wife and I are  
8 wireless internet service providers. As a matter  
9 of fact, we cover more territory in Louisiana with  
10 fixed terrestrial wireless than any other provider  
11 in the state of Louisiana.

12 I won't say we have more clients or our customer  
13 base is larger. I don't know that to be a fact,  
14 but I do know that we cover a humongous portion of  
15 the northern part of the state of Louisiana.

16 So the things that we do, we do really well.  
17 We've done a lot of it, and we continue to build  
18 our network infrastructure every day.

19 Two days after Hurricane Katrina come on shore  
20 in Bay St. Louis, Mississippi, my wife and I were  
21 driving down the road, and we noticed one of our  
22 local churches -- just the parking lot was full of

23 cars.

24 And so we whipped in there to see what was going  
25 on, and we realized pretty quick when we walked in

□

1 the door and we saw some of every denomination,  
2 some of every type of people from across the  
3 country; and it didn't take us a moment to realize,  
4 well, this is Katrina evacuees.

5 And so we walked around, and we consoled some of  
6 them; and we hugged some of them. And we talked  
7 with some of them, and we prayed with some of them;  
8 and I was talking to the pastor there.

9 And I said, "Well, Preacher," I said, "What are  
10 these folks doing to contact their loved ones?"

11 He said, "Well," he said, "You know, we don't  
12 have but one phone here, Mac."

13 And I said, "You know what, I can cure that."

14 As I walked out that door, I looked out the  
15 double doorway of the church; and there was one of  
16 my towers standing there.

17 So I called and rounded up a couple of our  
18 personal voice over IP phones. Another client  
19 promised equipment, some wireless gear, and we  
20 went. We hooked them folks with two voice over IP  
21 phones and either one or two personal computers we  
22 sat up there.

23 You know, it took all of 30 minutes to do this.  
24 It was really so easy to do that it's unreal.  
25 within the first 24 hours in that first church in

□

1 Mangum, Louisiana, which is 240 miles north of New  
2 Orleans, there was 11 people reunited with their  
3 families. You know, that is such a success for two  
4 voice over IP phones, one or two personal old work  
5 stations, and high speed internet connection, 30  
6 minutes worth of work.

7 You know, that's major. Well, it wasn't but  
8 just a few minutes when we realized that, gee,  
9 whiz, there were shelters like this all over North  
10 Louisiana.

11 So we got our employees and my wife and myself,  
12 and we started hanging gear where we already had  
13 service available. I mean, it was like a lot of  
14 Microsoft stuff. It was just point and click, I  
15 mean, point at the tower, plug them in, and let  
16 them rip.

17 We were contacted by Invenio out of California  
18 to go to Bay St. Louis, Mississippi, and provide  
19 this type of service for City Team, which is a  
20 Christian organization, and by this time, we had  
21 already had over 20 people volunteer from as far  
22 away as Washington State and California.

23 Jeffrey from -- where are you from Jeffrey?

24 California. People were showing up from all  
25 over the United States to Mac Deerman's farm to

□

1 come take a part in this. We had Trango broadband  
2 had donated just -- and overnighted wireless gear,  
3 just multitudes of thousands of dollars just  
4 overnight. Just pick up the phone and call, and  
5 they'd send me whatever I asked for, packed  
6 wireless antennas out of Salt Lake City, Utah. I  
7 mean, it was just unreal.

8 Neuvio, which is a voice over IP phone company,  
9 they were porting numbers for us. They were giving  
10 gear, and all we had to do was just go hang these  
11 people. Well, there's a couple of things that  
12 really -- really, that I saw that was terribly  
13 wrong as we continued our trip south after we  
14 connected the shelters in North Louisiana, and we  
15 were called gypsy geeks because that's what we  
16 were. I mean, we had -- we were utilizing 100  
17 percent of everything donated. It was coming out  
18 of my pocket and all the other volunteers' back  
19 pockets, from Sysco and from Trango and from Neuvio  
20 and from Aid Phone and from just so many different  
21 places. People were donating this gear.

22 As we went south to provide the service in Bay  
23 St. Louis and Waveland, Mississippi, we split crew.

24 Some went this way, and some went south to  
25 Hattiesburg, Mississippi, where we knew there were

□

1 large FEMA camps set up. Alexandria, Louisiana,  
2 which is closer to the New Orleans area than where  
3 I was at at the time.

4 And do you know what happened? The same thing  
5 happened in Hattiesburg as did Alexandria, and you  
6 know, there were FEMA camps full of people with no  
7 way to communication.

8 And, you know, we already know, but this just  
9 hammered it home. Communications are key to  
10 everything. I don't care what we're doing in life  
11 or where we're at. If you can't pick up a phone or  
12 get on the Internet, if you have no way to  
13 communicate with your loved ones or tell somebody  
14 what you need or where you're at, what's going on,  
15 you're lost. I mean, we live in a world today  
16 where communications are utmost vital.

17 well, Hattiesburg, Mississippi, and Alexandria,  
18 Louisiana, both -- neither one of them had  
19 communications, and, you know, it really made us  
20 fighting mad whenever FEMA turned us around and  
21 told us to leave with our gear. They didn't have  
22 any communications, and they didn't want any  
23 communications.

24 They had these people -- and y'all are going to

25 have to excuse me because it really does -- to this

□

1 very day, it ticks me off. I mean, it does more  
2 than that, but that's the language I'm going to  
3 choose to use the morning. Look, they had these  
4 folks under their tents, government tents, and the  
5 way I saw it, it was just like pigs in a pen.

6 They didn't have a phone for them, didn't want  
7 them to use a phone, and we couldn't give them a  
8 phone. I didn't understand that. I didn't  
9 understand that for a moment, and I don't  
10 understand that; and that bothered me so bad that  
11 it happened in Hattiesburg and in Alexandria,  
12 Louisiana. I'm telling you, thousands of people  
13 congregated, and the cell phones wouldn't even  
14 work.

15 FEMA said that they were going to supply these  
16 folks with something. And, you know, I'm not here  
17 to get on FEMA. I'm here to talk about  
18 communications, but this is part of it; and this is  
19 the first avenue that I've had to express this.

20 So wherever it can go, I think it needs to go.  
21 I think somebody needs to pick this candle up and  
22 take it on downtown and let everybody hear it and  
23 see it because, you know, it is absolutely  
24 ridiculous that we can live in the United States of

25 America today and treat our people like that.

□

1 Excuse me. I take it very personal because, you  
2 know I have a lot of kin folks in Southern  
3 Mississippi and Southern Louisiana. There were a  
4 lot of people down there that came this way that  
5 didn't know anybody. These people were displaced  
6 and didn't have a clue as to where they were going  
7 to go.

8 I'm going to get back to the spectrum thing. As  
9 we left Alexandria, we headed on to Bay St. Louis,  
10 and I'm going to have to hurry here.

11 I said I was going to make it short and sweet,  
12 didn't I? I'm sorry.

13 MCI managed to allow us onto their tower in  
14 Gulfport, Mississippi. We set up a back haul link  
15 from Gulfport, Mississippi, to Long Beach,  
16 Mississippi, and from Long Beach, we relayed a link  
17 right into Waveland, Mississippi, on the water  
18 tower. We brought high speed Internet, a DS3 in  
19 originally, but we had so much trouble making the  
20 link between the MCI tower and the Mississippi  
21 Power and Light tower due to the interference with  
22 so many people trying to get their networks up.

23 We eventually dropped down to some 900 MHz gear  
24 donated by Trango broadband, which dropped up to a  
25 3 mega bit link, but, you know what, that link is

□

1 still up and still running today. We're still  
2 providing telephone service, high speed Internet,  
3 and still have so many PC labs running down there  
4 today that y'all just wouldn't believe. I'd love  
5 to take each one of you by the hand and take y'all  
6 to Bay St. Louis and Waveland, Mississippi, today.

7 The University of Southern Mississippi for the  
8 second semester has donated interns to keep the  
9 network going, and I think that the University of  
10 Southern Mississippi deserves a bow and a hug of  
11 the neck to whoever is responsible for financing  
12 that. They have done an absolutely outstanding  
13 job.

14 We could be so much better prepared in this if  
15 we had the correct spectrum. The TV white spectrum  
16 is supposed to be available and could be made  
17 available for wireless Internet service providers,  
18 and, people, this is how easy it would be; and I  
19 see the red light.

20 This is how easy it could be. We could build  
21 the back haul. Back hauls could be built  
22 overnight. We could have deployed one wireless  
23 access point in the city of Waveland, Mississippi,  
24 on top of that water tower and with low power, TV  
25 white space spectrum that could be available today,

□

1 we could have caught 100 percent of every facility  
2 within 11 miles of that area with one access point.

3 It's not a difficult thing. It all has to do  
4 with the correct spectrum for the correct job.

5 The things that we are still battling down in  
6 Bay St. Louis and Waveland, Mississippi, today to  
7 still connect more people that are waiting, where  
8 there are volunteer groups, the Morale Eye Care  
9 Village. City Team has two or three locations.

10 There's so many different places down there even  
11 today that telecommunications are not possible.  
12 Communications are not possible unless they get in  
13 a vehicle and come to one of the hot spots we've  
14 set up. Libraries down there today do not have  
15 high speed wireless Internet service, and radio  
16 response is working this very day to put up some  
17 more hot spots for them people in Bay St. Louis and  
18 Waveland, Mississippi, as well as Long Beach.

19 white space, people, white space. FCC, I love  
20 y'all, appreciate y'all. Y'all have done such a  
21 fine, great job for so many years. Look, Congress  
22 has got two bills in the works now to allow the TV  
23 white space for some of those. I'm not sure what  
24 the attachments are going to be to that, but with  
25 the correct spectrum, everything is possible; and

□

1 without the correct spectrum, it's going to be a  
2 battle just like it is down there today. Thank  
3 y'all for your time.

4

5 Nancy J. Victory, Chair of the Independent Panel

6 Thank you very much. Thank you to all of the  
7 speakers. Let me now open up the floor to  
8 questions from our panel. Yes. Sheriff Sexton.

9 MR. SEXTON: First of all, I'm from  
10 Alabama. So I understood you pretty good.

11 MR. DEARMAN: Very good. I knew there  
12 would be some others of us like us here.

13 MR. SEXTON: I appreciate your passion  
14 in talking about the worst and the best that you  
15 have seen. I just want to take this opportunity --  
16 the young lady over here in the corner that has  
17 been transcribing for you. I was sitting in the  
18 back. So I could see this, but I noticed that she  
19 was trying to take summer grammar and turning it  
20 into --

21 MR. DEARMAN: She had a tough job,  
22 didn't she?

23 MR. SEXTON: But thank you very much  
24 for those comments.

25 MR. DEARMAN: You know, one thing I

□

1 didn't mention is Mr. Sarratt and HAM radios --  
2 don't ever do anything to degrade the signal that  
3 them HAMM operators are using and utilizing today  
4 and have since the '60s. It was our only form or  
5 means of communications while we were there.  
6 Without the HAM radios, folks, it would have been  
7 really ten times worse than what it was in Southern  
8 Mississippi.

9 Thank you, HAM operators. I  
10 appreciate y'all.

11 MS. VICTORY: Thank you very much.  
12 Steve Davis.

13 MR. DAVIS: Yes. Very quickly, the  
14 space Data balloon idea, that is a fairly novel  
15 idea, and I was curious, how long do those stay  
16 aloft when you launch them and what frequency do  
17 they operate on?

18 MR. KNOBLACH: Our commercial network  
19 is deployed at 900 MHz narrow band PCS band. 901  
20 to 902 is where the devices transmit, and the  
21 SkySites transmit at 930 and 931 and 940 and 941.  
22 Under our military contracts with the air force, we  
23 have now down banded it to the UHF band so that  
24 radios such as this one that the troops use don't  
25 have to be changed out.

□

1                   They can, of course, work at any band.  
2   It's just a matter of designing the radios to work  
3   in that frequency. What we have effectively  
4   designed is a 20-mile-high tower, and just like the  
5   difference between a paging tower or a voice tower  
6   HDTV tower, it isn't the steel the tower is made  
7   out of. It is what radiates when you put on top of  
8   the tower.

9                   So it very quickly can be changed to  
10  other things. It stays aloft for about 24 hours  
11  today. That's really battery life limited. By  
12  going to solar panels and fuel cells, we expect to  
13  get one that will last about three days, which is  
14  the time it takes to drift from the West Coast to  
15  the East Coast.

16                  MR. DAVIS: What recommendation do you  
17  have for the panel with regard to that technology?  
18  How do you see us deploying, or what would you ask  
19  us to recommend with regard to --

20                  MR. KNOBLACH: As I spoke about, one  
21  thing, we've written a letter to Chairman Martin  
22  that is enclosed in your blue folders there.  
23  During disasters, obviously, we use spectrum over  
24  wide footprint because we have wide coverage area  
25  and there has to be some spectrum coordination to

□

1 allow those channels to be freed up.

2           In a disaster like Katrina where those  
3 frequency channels are probably not being used  
4 anyway because the ground-based infrastructure has  
5 been wiped out, and so if some declaration of  
6 emergency came along with a waiver to fly these,  
7 then we could, you know, bring all the spectrum up  
8 to the higher platforms; and then as the  
9 terrestrial infrastructure is reconstituted,  
10 slowly bring the channels back down because that  
11 obviously gives you more capacity because there's  
12 more cell re-use.

13           MR. DAVIS: Okay. And I want to close  
14 simply by thanking Mr. Sarratt for all the help  
15 that the amateur radio operators and HAM radio  
16 operators did provide to the broadcast community.  
17 They were an indispensable form of communication  
18 into and out of the impacted areas, and I just want  
19 to thank you for your service in that area.

20           MS. VICTORY: Thank you very much.  
21 Any other questions from the panel?

22           well, then, I want to very much thank  
23 this group of speakers. You have given us some  
24 fascinating ideas. So thank you very much.

25

□

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

Before we close our meeting today, I wanted to give an opportunity to the chairs of the three working groups to just provide a very brief status report as to where you are and where you are going.

So if I could call on Marion Scott

□

1 first, the chair of working Group 1, focused on  
2 resiliency.

3

4 Marion Scott, Chairperson, Working Group 1  
5 Infrastructure Resiliency Committee

6

7 we are Infrastructure Resiliency Committee, and  
8 we were to review how and why certain portions of  
9 the communications network failed, to identify  
10 which portions of the communications network  
11 continued to work in the midst of the hurricane and  
12 why, to examine how communications technology can  
13 be made less vulnerable to failing, and to study  
14 what steps could be taken pre-event to strengthen  
15 the communications infrastructure, gather that  
16 knowledge together and then make recommendations to  
17 the FCC on how they can assist with that within the  
18 scope of their charter.

19 we have been meeting biweekly since the meeting  
20 in Washington, DC. We had another face-to-face  
21 meeting last night.

22 we started out by defining the various  
23 components of the communications network to make  
24 sure that we were talking about apples and apples  
25 because it's a jargon-filled industry. So we all

1 needed to get on the same playing field, and I  
2 won't go through those definitions just in the  
3 interest of time. But we wanted to start out with  
4 a common platform.

5 We assigned individual elements of what we  
6 considered infrastructure to various members of the  
7 committee, and I don't know about the other  
8 committees; but everyone on this committee had lots  
9 and lots of homework.

10 And we went out and spoke to other members of  
11 our respective industries to find out what their  
12 issues were and did they have recommendations to  
13 bring back to the FCC as well. So we've  
14 interviewed an awful lot of people besides those  
15 who have generously given testimony in the public  
16 forum and have provided input that Jean Ann and  
17 Lisa have passed along to us on e-mail.

18 Our next step is to consolidate all that we've  
19 learned. We've begun doing that. We're  
20 consolidating all that we have learned.

21 Now we want to begin to scope it and kind of  
22 bring it in a little bit and say, okay, what are  
23 the key things, and then out of those key things,  
24 what can we carry forward to the FCC in the form of  
25 a deliverable that's going to help in the future.

1       Our next meeting is going to focus on  
2 summarizing those, and we hope to have some  
3 recommendations within probably the next 30 days at  
4 least drafted.

5

6 Nancy J. Victory, Chair of the Independent Panel

7       Thank you very much. The panel very much looks  
8 forward to reviewing that. So thank you, Marion.

9       Let me turn next to Steve Davis, Working Group 2  
10 on recovery procedures and coordination.

11

12

13

14

15

16

17

18

19

20       Steve Davis, Chairman, Working Group 2

21       Recovery Procedures and Coordination

22

23       Thank you. Yes. We are working on recovery  
24 procedures and coordination. We have met twice so  
25 far since the inception of this panel, once by

1 teleconference and once in person, and our next  
2 conference call is scheduled for March 28th at 10  
3 a.m. Central Standard Time.

4 We have also developed within our own group two  
5 subgroups. I'm going to go through some of the key  
6 issues we are looking into and then talk about the  
7 subgroups just briefly.

8 One is the issue of emergency responder  
9 designation. Clearly, that has been a topic that  
10 has been brought up by many of the presenters in  
11 the last two days, and it is something that we need  
12 to hone in on a little bit, what does that mean,  
13 who is included within that, and how is that  
14 approached.

15 Credentialing, we're looking into that. We know  
16 that there are some other groups that are also  
17 looking at this issue, and we don't need to  
18 re-invent the wheel.

19 So we are working with those other groups that  
20 could help us in that area, and we are interfacing  
21 with them so, again, we don't duplicate their  
22 efforts.

23 Also, access to facilities, those of all  
24 providers, whether it is broadcasters or wireless  
25 service providers, landline service providers, or

1 the contractors that will help our public safety  
2 people to get their radio and communications  
3 equipment back up and running. We're looking at  
4 how we can facilitate that, and that would fall  
5 within the credentialing aspect of our purview.

6 Also, prepositioning of personnel and materials  
7 that might be required prior to a disaster when we  
8 fortunate enough, as we were in the case of  
9 Katrina, to know ahead of time that there may be a  
10 disaster. Clearly, that is not going to be the  
11 case in terrorist attacks or earthquakes or other  
12 things like that.

13 And, finally, and we think possibly most  
14 importantly, a state emergency coordinating group  
15 that would coordinate with local officials and  
16 state officials in such a way that we have a single  
17 point of contact to all these diverse interests,  
18 providers, telecommunications workers, et cetera,  
19 to have one place to go to get information and also  
20 we don't have a situation where it becomes chaotic  
21 attempting to get information from the central  
22 point or to give information to the central point.

23 Our two subgroups are going to be involved in  
24 the coordinating body and entity, what that would  
25 look like, who would be on it, how it would be put

1 together, and what the functions would be, and then  
2 the other subgroup is involved with  
3 interoperability and recommendations for what we  
4 might call first responder status. That's the most  
5 important issue right now is the WPS, TSP, and  
6 GETS recommendations.

7 I want to thank Colonel Booth for all of his  
8 hard work and Nancy for her contributions to our  
9 panel as well as everybody else.

10

11 Nancy J. Victory, Chair of the Independent Panel

12 Thank you very much, Steve. Let me turn to  
13 Steve Delahousey for Working Group 3 on emergency  
14 communications.

15

16

17

18

19

20

21 Steve Delahousey, Chairman, Working Group 3  
22 Emergency Communications

23

24 Thank you, Nancy. Our group has met twice since  
25 the January meeting, and we met again briefly

1 today. Some of the issues that we are addressing  
2 in our group are the use of temporary and portable  
3 base stations for public safety during a disaster,  
4 use of nontraditional emergency communications such  
5 as satellite phones, the role of nontraditional  
6 technologies such as the Exempt Part 15,  
7 communications interoperability -- that's a big  
8 one; all the groups are working on that -- regional  
9 planning and response for emergency communications,  
10 back-up routing for 911 public safety answering  
11 points, impediments to emergency communications,  
12 and it sounds like we perhaps have some overlap  
13 with Steve Davis' group. I need to get with you.  
14 We can probably save some redundancy there.

15 But the same thing, access for media,  
16 technicians, and staff and ensure there are central  
17 resources to broadcast and print media such as  
18 fuel, equipment arrive at its intended locations.

19 Other areas we are looking at are to explore the  
20 more effective utilization of EAS, and another one  
21 that is becoming pretty big is to encourage the  
22 more effective implementation or the modification  
23 of the National Incident Response Plan,  
24 particularly Section ESF2, which deals with  
25 emergency communications.

□

2 and yourself or Lisa, we feel that there may be a  
3 need to make some interim recommendations prior to  
4 our June 15th deadline. The reason for that is  
5 we've seen in the last couple of days there is a  
6 lot of concern about what recommendations have come  
7 forward to better prepare us for the upcoming  
8 hurricane season. There's been a lot of  
9 discussion, but not a lot of substance or  
10 recommendations that we can make to the full panel  
11 yet that the full panel can in turn make to the  
12 FCC.

13 So we feel that there are maybe one or two  
14 issues that we may be prepared to make some  
15 recommendations for if the -- logistically, if  
16 there's a mechanism to move forward and do that  
17 prior to the hurricane season.

18 And, lastly, again, with guidance from your  
19 group to possible have open door forums in three  
20 locations in South Mississippi, South Alabama, and  
21 South Louisiana particular for emergency  
22 telecommunications, sort of a round table  
23 discussion to get some ideas, best practices,  
24 things that they experienced in Hurricane Katrina.

25 Our next meeting will be within the next two

□

1 weeks. We will wait until we get some further

2 guidance from your group on whether or not we can  
3 move forward with the idea of the open door forum  
4 and the subcommittee that we formed to look at  
5 perhaps interim recommendations.

6

7 Nancy J. Victory, Chair of the Independent Panel

8 Great. Thank you for that report.

9 Any other business that any of the  
10 panelists would like to raise at this point?

11 Our next full meeting of the panel  
12 will probably be the end of April. We will back in  
13 touch with you shortly about a date and a location  
14 for that, but figure it will be the end of April.

15 MR. KIRWAN: Is there a way that we  
16 can have the meeting other than on a Monday?

17 MS. VICTORY: I appreciate that, and I  
18 did take note of that. This had to be with when  
19 the facilities were available.

20 So I will take that back, and we will  
21 shoot for a day other than a Monday. I will be  
22 delighted to do that.

23 With that, the meeting is adjourned.  
24 Thank you all for traveling here. Thank you to all  
25 of our speakers, and thank you for your

□

1 participation and attention.

2

3 (The Meetings were adjourned at approximatley 12:50  
4 p.m.)

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25