TRANSCRIPT OF PROCEEDINGS

IN THE MATTER OF:)
)
JOINT ADVISORY COMMITTEE)
ON COMMUNICATIONS)
CAPABILITIES OF EMERGENCY,)
MEDICAL AND PUBLIC)
HEALTH CARE FACILITIES)

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FEDERAL COMMUNICATIONS COMMISSION

IN THE MATTER OF:)
)
JOINT ADVISORY COMMITTEE)
ON COMMUNICATIONS)
CAPABILITIES OF EMERGENCY,)
MEDICAL AND PUBLIC)
HEALTH CARE FACILITIES)

Commission Meeting Room
Federal Communications
Commission
445 12th Street, S.W.
Washington, D.C.

Monday,
October 29, 2007

The parties met, pursuant to the notice, at 10:05 a.m.

PARTICIPANTS:

JIM BUGEL
MICHAEL J. ACKERMAN, Ph.D.
JOHN F. ADAMS, JR.
CURTIS M. BASHFORD
TED O'BRIEN
JAMES A. CORRY
DREW E. DAWSON
STEVE J. DELAHOUSEY
ERIC K. GRIFFIN
LISA KAPLOWITZ, M.D., MSHA
RICHARD J. LIEKWEG
JONATHAN D. LINKOUS
KEVIN MCGINNIS
JOHN F. NAGEL
THOMAS S. NESBITT, M.D. (Via Telephone)
VIRGINIA PRESSLER, M.D.
MURAD RAHEEM
SHAWN R. ROGERS (Via Telephone)
MIKE ROSKIND
JULIETTE SAUCIE (Via Telephone)

PARTICIPANTS: (Cont'd.)

KAREN SEXTON
JIM TRAFICANT
CARL C. VANCOTT
JOHN S. WILGIS (Via Telephone)
CHRISTOPHER K. WUERKER, M.D.
ERIC WERNER (Via Telephone)

APPEARANCES
DAVID AYLWARD
JAY SANDERS
MARY ELLEN HENNESSY
IVAN GOTHAM

P R O C E E D I N G S

(10:05 a.m.)

MR. BUGEL: Good morning ladies and gentlemen. Welcome to the Joint Advisory Committee on Communications Capabilities of Emergency Medical and Public Healthcare Facilities. I'm Jim Bugel, I'm the Joint Advisory Committee Chair.

Couple house order issues. The microphones are voice activated, so they are on mute until you speak. Because this is recorded if you could also identify yourself before you speak we would greatly appreciate it for the court reporter. We'll now take role.

For those on the phone, Colonel Ebberts? Just say aye.

MR. EBBERTS: Here.

MR. BUGEL: Thomas Nesbitt?

MR. NESBITT: Here.

MR. BUGEL: Shawn Rogers?

(No response.)

MR. BUGEL: John Wilgis?

MR. WILGIS: Here.

MR. BUGEL: Eric Werner?

MR. WERNER: Here.

MR. BUGEL: Thank you. Dr. Ackerman?

MR. ACKERMAN: Here.

MR. BUGEL: John Adams?

MR. ADAMS: Here.

MR. BUGEL: Curtis Bashford.

MR. BASHFORD: Here.

MR. BUGEL: Donna Bethea Murphy?

(No response.)

MR. BUGEL: James Corry?

MR. CORRY: Here.

MR. BUGEL: Drew Dawson?

MR. DAWSON: Here.

MR. BUGEL: Steve Delahousey?

MR. DELAHOUSEY: Here.

MR. BUGEL: Eric Griffin?

MR. GRIFFIN: Here.

MR. BUGEL: Dr. Kaplowitz?

MS. KAPLOWITZ: Here.

MR. BUGEL: Richard Liekweg?

MR. LIEKWEG: Here.

MR. BUGEL: John Linkous?

MR. LINKOUS: Here.

MR. BUGEL: Kevin McGinnis?

MR. MCGINNIS: Here.

MR. BUGEL: John Nagel?

MR. NAGEL: Here.

MR. BUGEL: Dr. Pressler?
MS. PRESSLER: Here.
MR. BUGEL: Mr. Raheem?
MR. RAHEEM: Here.
MR. BUGEL: Shawn Rogers?
MR. ROGERS: Here.
MR. BUGEL: Mike Roskind?
MR. ROSKIND: Here.
MR. BUGEL: Karen Sexton?
MS. SEXTON: Here.
MR. BUGEL: Jim Traficant?
MR. TRAFICANT: Here.
MR. BUGEL: Carl VanCott?
MR. VANCOTT: Here.
MR. BUGEL: Dr. Wuerker?
MR. WUERKER: Here.
MR. BUGEL: Ted O'Brien for Iridium?
MR. O'BRIEN: Here.
MR. BUGEL: Thank you. Okay. I would now like to turn the podium over to Lisa Fowlkes from the FCC.
MS. FOWLKES: Good morning, I'm Lisa Fowlkes, Deputy Bureau Chief of the Public Safety and Homeland Security Bureau here at the Federal Communications Commission.

On behalf of FCC Chairman Kevin J. Martin and the other FCC Commissioners I would like to welcome you to the first meeting of the Joint Advisory Committee on Communications Capabilities of Emergency Medical and Public Healthcare Facilities. Thank you for agreeing to serve as members of this important committee. We appreciate your commitment to this critical undertaking.

I would also like to thank Jim Bugel for agreeing to chair this committee. The creation of this committee emphasizes the importance of effective and reliable communication systems for emergency medical and public healthcare facilities. As required by the implementing recommendations of 9/11 Commission Act, the committee will assess the specific communications capabilities and needs of emergency medical and public health care facilities.

The committee will also examine options to accommodate growth of communication services used by these facilities and options to improve integration of these communication systems with existing or future emergency communication networks. The committee must report its findings to Congress by February 4, 2008. This will be a challenging but rewarding task.

We are confident that your expertise and

experience will serve the committee extremely well in fulfilling its goals. Thank you again for dedicating your time to this important endeavor.

MR. BUGEL: Again, good morning, ladies and gentlemen. You have before you a packet. In it is an agenda, there is also a list of your fellow committee members and a copy of most of the materials that have been sent out to you via email over the last two weeks.

I've got some opening remarks, and then we'll go kind of into an overview of the committee structure and how we plan to get our task accomplished. Then we will go into a session where each one of you will have an opportunity to introduce yourselves and your area of interest. We also have with us guest speakers today from COMCARE, and the Global Telemedicine Group and New York State Health Department. Then we'll conclude our program today.

Again, I want to thank you for attending the first joint meeting and thank you for your participation. Over the past two weeks I have had the opportunity to speak to almost every one of you about why you have volunteered to serve on the committee, your specific interests in this matter and your expectations.

The knowledge, expertise and talent in this room is truly impressive. Each one of you has a lot to contribute to this effort, and I'm confident that our final report will reflect that knowledge and skill. We have been asked to complete our report in a tight timeline, and we'll have to accomplish much of our work during the hectic holiday season.

Your decision to volunteer demonstrates that you recognize how vital this task is to our country and fellow Americans. As you know, the establishment of the committee is part of Congress' attempt to implement the recommendations of the 9/11 Commission.

We can all agree that if there's another terrorist attack, pandemic, or natural disaster the scale of Hurricane Katrina or similar to the fires just experienced in southern California we have to be better prepared to deal with the aftermath. As you all know, there is much we can do to improve our health care communications system.

It is hard for the public to comprehend in this day and age that emergency agencies still have difficulties communicating with each other and sharing information, especially in mass casualty events. Existing and new technologies have the potential to bring health care to unserved communities, improve

public health and cut costs.

Technology exists today that can fully integrate police, fire, Homeland Security, EMS communication systems. Government policy will continue to play a valuable role in determining how these future needs are met and whether we maximize the use of technology to protect Americans. I believe our mission is clear as outlined by Congress.

One, assess the specific communications capabilities and needs of emergency medical and public health care facilities including the identification of required improvements for basic voice data and broadband capabilities. Two, assess options to accommodate the growth of basic and emergency communication services used by emergency medical and public health care facilities.

Finally, assess options to improve integration of communication systems used by emergency medical and public health care facilities with existing or future emergency communications networks. We have been asked to produce a forward thinking report that follows these parameters and submit our findings directly to Congress.

Before I get into the details of how we will proceed I'd like to take a moment to explain what

Joint Advisory Committees are all about. Some of you are familiar with them, perhaps some of you have served on one before. Congress may act on our findings, they may not. That depends on the quality and relevance of our report and Congress.

There is little doubt in my mind, however, that if we produce a comprehensive report people will pay attention. For years Congress has looked to private and public sectors to work together to tackle difficult issues. Congress has established such committees on issues ranging from electronic commerce during the dot com boom, postsecondary education financial assistance and food safety procedures.

Now, Congress has directed the expert agencies in communications, the FCC and NTIA, along with HHS and DHS to establish our Joint Advisory Committee. But as you know, the issues of emergency medical and public health communications are far more reaching, and our deliberations are very timely.

Not a day goes by when Congress or the next President to be in Iowa or New Hampshire doesn't talk about today's health care challenges. With this national health care debate looming on horizon many have pointed out that the greater use of technology could significantly cut costs and reduce medical

errors.

It's amazing that currently only five percent of clinicians have computerized patient records and that only a small fraction of the billions of medical transactions that take place each year in the United States are conducted electronically. The ability to consult patient full medical history online would make it easier for doctors to deliver the most appropriate and comprehensive care.

Public health officials could use the database to detect trends and determine the value of different treatments for specific kinds of patients. According to one recent survey a full electronic health care or health information technology system could save the country as much as $77.8 billion annually, approximately five percent of the roughly $1.66 trillion we spent on health care in 2003.

The idea of integrating our health care network has support at the highest levels of government. In 2004, then HHS Secretary Tommy Thompson released the first outline of a 10 year plan to build a national electronic health information infrastructure in the United States.

The report, entitled *The Decade of Health Information Technology: Delivering Consumercentric*

and Information Rich Health Care, was produced in response to a call by President Bush for most Americans to have electronic health records within a decade.

As well, the Health and Human Services Department has recently established the highly successful Nationwide Health Information Network, NHIN. Its goal, to provide a secure nationwide interoperable health information infrastructure that will connect providers, consumers and others involved in supporting health and health care.

Billions of dollars are being spent on IT infrastructure in every industry across our economy in order to leverage the benefits of Internet Protocol networks and systems. How will emergency medical and public health communications also leverage this investment?

So we have emergency medical communications, public health communications, the integration of the two from a tactical and interoperable level, but overarching all of this is the promotion of electronic connectivity in health care or health IT. In the end, we hold enormous potential on what we can communicate to Congress.

As I said before, public health in

conjunction with advances in information technology can save our government, the American taxpayers and all health care consumers sums of money. I want to repeat that it's important for all of us to reach beyond the membership comprised here today.

Numerous studies, papers and systems are being created each and every day within the realm of our charge.

Organizations such as Health Care Information Management System Society and E-Health Initiative have been thoughtful leaders in offering proposals and best practices for health care providers and consumers alike to harness the technology at their fingertips, as well as other organizations such as COMCARE, which will be presenting to us later today, and first responder organizations are working hand in hand with state, federal and local authorities to build necessary IT infrastructure to propel seamless emergency response into the 21st Century.

More importantly, each and every one of you here today has played an integral role in pushing the envelope in public health IT and emergency response so Americans can get better care. So how will we proceed? How can we manage ourselves over the course of the next several months to prepare our report?

From a mechanical perspective and after significant input from many of you I have proposed dividing our committee into four working groups that will address each of the objectives. Each group will be assigned a chair and vice chair, and those two individuals will be responsible for organizing meetings and leading the effort for their respective working groups to complete their portion of the overall report.

All of you will be appointed to a particular working group in order to keep the workload balance. Nevertheless, I encourage you to become involved in the other working groups, and please don't hesitate to be very knowledgeable and participate in their efforts.

The four working groups will be the Emergency Medical Group; the Public Health Group; the Technology Integration Group; and the Project Management Group. The Project Management Group will be comprised of the chairs and the vice chairs of the three working groups and will be the main line of communications between me and the other working groups.

We will put up a slide later on that I will hand out that will show you exactly what working group

you've been assigned to and who the chairs are. We will divide our work into three phases.

Phase 1 will be three weeks long from October 30 to November 21. The purpose of Phase 1 will be to assess the current landscape of communications capabilities in health care facilities. Each group will establish its mission and will consider the needs and requirements of these facilities.

They will examine basic and emergency communication technologies and determine gaps that call for improvement. In Phase 1 we also want to ask each working group to identify any progress currently underway in the subject area specifically pointing out recent improvements and promising technologies in each area that are already underway.

Many of you are hard at work with alternatives and new developing technologies in this area, so this is an opportunity to point out critical work already being performed. Phase 2 will be six weeks long from November 26 to January 8. During this period the groups will look forward to determine what specific improvements should be made.

The groups will repurpose their mission and project the changing needs and requirements for new

communications at health care facilities. They will also determine what capabilities will be improved upon and will create plans to accommodate growth. Finally, Phase 3 will last two weeks from January 9 to January 25. At this point we will conclude the final draft of the report.

The project management group will be responsible for producing a draft of the report based on the work completed by the working groups in Phase 1 and Phase 2, but the other working groups will be able to develop change requests to that document. The project management group will take time to consider these requests.

Once that process is complete, the project management group will produce a final draft. Then we will set aside a week for the full committee to consider and approve the report. We are driving to a consensus based document. As I said earlier, we have been handed a valuable opportunity.

The chance to speak directly to Congress on an issue that affects the health care, health and safety of millions of Americans. In light of this opportunity and the report we send to Congress it is critical that we continue to foster an environment and the technology space that will propel innovation

through market based solutions.

Together, this Joint Advisory Committee will define the next generation of health care and communication disaster response for our nation. Again, I thank you for your participation and your willingness to serve your country.

Need to take a breath. With that, I think it's now time to start the brief introductions of each of the committee members. I'll start with myself. I'm Jim Bugel, I work with AT&T, I'm based here in Washington, D.C. I most recently completed the Chair position of the President's National Security Telecommunications Advisory Committee's Report on Emergency Communications and Interoperability that was sent to the President in February of this year. My area of focus for my company is national security, emergency preparedness and public safety policy. I know a few of you. I look forward to working with all of you. As I said earlier, I think I have spoken to almost every single one of you over the last two weeks except for about two of you.

I am truly impressed with the talent that's assembled here and look forward to working with you. Guess we'll go alphabetically.

Mr. Adams? If you could identify yourself,

too, please?

MR. ADAMS: I'm John Adams and I work for Raytheon. I have about 30 years of experience working with the spectrum management and technology. Currently, I am the Chairman of the Spectrum Management Group for Raytheon trying to make sure everything that we do with the wireless are regulated and fully in compliance with national laws because a lot of people out here now are radiating signals and stuff unlicensed.

We've got to make sure that we're licensed, and the other thing, too, is make sure we find the right technology for this group. I look forward to working with each and every one of you. As for before I came to Raytheon I spent 21 years in the Army serving my country, and this is another opportunity to do that, so I look forward to it.

MR. BUGEL: Thank you, Mr. Adams. Dr. Ackerman?

MR. ACKERMAN: I'm Michael Ackerman. My home base is the National Institutes of Health, the National Library of Medicine. I'm the Chief at the National Library of Medicine, the Assistant Director for something we call High Performance Computing and Communications which comes out of an earlier 1990s

program across government in the area of high performance computing and communications.

My office is responsible for advanced networking and the application of advanced networking to health care. I'm a biomedical engineer by training with many, many years of experience.

I often characterize myself as an expert in everything and a master of none, Jack of all trades and master of none, but that's the nature of biomedical engineering, being able to speak all the languages and mix and match to the needs that come up. I serve in several committees, but the one that's relevant to this is that I serve on the Advisory Committee to Internet2 for the purpose of health applications.

MR. BUGEL: Thank you, Doctor. Mr. Bashford?

MR. BASHFORD: Good morning. Curt Bashford with General Devices. I'm happy to be here this morning. GD has been involved in EMS communications linking hospitals, and ambulances and public safety for a number of years. I've been with the company 21 years now, the last 17 of which have been in that EMS communications setting.

We didn't dare call it telemedicine until

the last couple of years or we'd have vegetables thrown at us, but it is all coming together. We're offering solutions in voice, and telemetry, and data and video. The convergence of technology in today's setting is really allowing all these thoughts to finally come to fruition and begin to come together to serve the need that's out there.

I'm also, background, electrical and biomedical engineering along with seven years in a former life in EMS. I've worked with hundreds of hospitals and EMS services throughout the country, City of New York Fire Department, University of Chicago.

Most recently our latest project I ever saw from our end, City of Tucson Fire EMS has the first commercial citywide wireless EMS telemedicine system doing concurrent two way video voice and data, so it's kind of the wish list of what we've been trying to accomplish in the field for a number of years. Excited to be here. I've worked with a few of you in the past, and look forward to the next coming months.

MR. BUGEL: Thank you. Mr. Corry?

MR. CORRY: Good morning, Jim Corry, I'm with Mobile Satellite Ventures based in Reston, Virginia, and retired after 22 years as a Secret

Service Agent. I have a pretty strong background in emergency and hyperbaric medicine. Here to contribute to the cause.

MR. BUGEL: Thank you, Jim. Mr. Dawson?

MR. DAWSON: Thank you, Mr. Chairman. First of all, congratulations on your work and that of NTIA and FCC in terms of getting the committee stood up so quickly. It's very impressive. I'd like to provide just a little bit of background about myself. I currently serve as a Director of the Office of Emergency Medical Services at National Highway Traffic Safety Administration within the Department of Transportation.

This is a position I've held for about four and a half years. For those of you who don't know, NHTSA has played a prominent role in emergency medical services system development for nearly 40 years. Also, within the NHTSA Office of Emergency Medical Services is housed the National 911 Office, a project that we operate jointly with NTIA.

Prior to NHTSA I was a state EMS Director in Montana. I was the State of Montana for over 30 years including serving as its State EMS Director and during the last part of my tenure overseeing a variety of public health programs. Of course my real interest in

emergency medical services devolved or involved working with my local ambulance service on a volunteer basis for probably about 20 years.

I'm pleased that the committee has been formed; I certainly appreciate the charges from Congress and the very short timeframe in which these need to be prepared. I also think that this committee's work provides a valuable opportunity to lay the groundwork for modernizing the EMS and public health communications system in the nation.

Although I know that reporting to Congress is our primary responsibility the committee's report will also be very useful to the Federal Interagency Committee on Emergency Medical Services. That's a statutorily created group that is responsible for federal interagency coordination on emergency medical services.

There is a committee on medical communications and 911 that is chaired by the FCC and myself. My boss, Nicole Nason, is currently chairperson of the Federal Interagency Committee on Emergency Medical Services. I would also point out that it will be very helpful to us as we convene the National EMS Advisory Council which is very near to being created now.

The information from this will be very useful to that process as well. We're certainly looking forward to it. Thank you, Mr. Chairman.

MR. BUGEL: Thank you, Mr. Dawson. Mr. Delahousey?

MR. DELAHOUSEY: Yes, thank you. I'm Steve Delahousey, I'm a registered nurse and paramedic, I'm Vice President of Emergency Medical Services Corporation. We are the parent corporation for American Medical Response, or AMR, who is the largest provider of EMS in the United States.

One of our subsidiaries is also EmCare. It is one of the leading providers of ER staffing with emergency physicians. For Hurricane Katrina I served as the ESFA medical disaster officer for south Mississippi. I chaired the Public Safety Subcommittee for the FCC's independent panel to review communications for Hurricane Katrina.

Most recently our subsidiary, AMR, was selected by the government to serve as the first ever federal contractor for FEMA to provide ground and air ambulance service for an incident of national significance. I'm the past Chair of the Harrison County 911 Commission, and I look forward to working with you. Thanks.

MR. BUGEL: Thank you, sir. Colonel Ebberts, have you joined us?

MS. SAUCIE: This is Dr. Juliette Saucie, I'm sitting in for Colonel Ebberts this morning. I can tell you a tiny bit about him. He's the Director of Homeland Security for the City of New Orleans, certainly was in charge during Hurricane Katrina and the rescue, and response and relief efforts in the City of New Orleans.

I am the Director of EMS for the City of New Orleans. I also serve as the Medical Director for EMS there, the Medical Director for the Fire Department there, and serve as the Chief Medical Officer for Homeland Security there. I am an Assistant Professor of Medicine in Emergency Medicine at LSU in New Orleans.

I have served as ESF-8 lead during, well, post-Katrina really in City of New Orleans. I'm a former paramedic. Steve Delahousey was actually my first boss. You can laugh now, Steve, if you want.

I'm a member of the Louisiana Emergency Response Network Subcommittee out of Department of Homeland Security Region 1, serve as the Co-Chair of the Emergency Preparedness Committee for the National Association of EMS Physicians, and am honored to sit

in for Colonel Ebberts today. Thank you very much.

MR. BUGEL: Thank you very much. Appreciate that. Mr. Griffin?

MR. GRIFFIN: Thank you, Mr. Bugel. I'm Eric Griffin, Director of Lee County Emergency Management in Sanford, North Carolina. I'm very pleased to be here to be able to serve in this capacity and work with each one of you on this commission.

During times of or in between active emergencies I work to ensure our community's plans, equipment and personnel are ready to respond to any disaster, and during emergencies I'm responsible for coordinating all emergency response in Lee County and its municipalities.

I've served as Director in my present position for the past 11 months, and before that I've worked and I have over eight years in emergency services in Wake County and New Hanover County in North Carolina. My understanding as it pertains to the scope of this committee comes primarily from the realm of integration and planning.

I see my particular function as being helpful in working with my peers on this committee to ensure that the technology and needs described by the

various work groups are able to be implemented by the end users while the systems that are ultimately proposed are able to be integrated at a legacy communication plans and systems.

I look forward to serving and learning from each of you. I look around here and I see a wealth of expertise and knowledge, and I think this is going to be a great working relationship. I think the product that we all come together to produce is going to allow our Congress to make great strides for our nation. Thank you.

MR. BUGEL: Thank you, Mr. Griffin. Dr. Kaplowitz?

MS. KAPLOWITZ: I'm Lisa Kaplowitz, I'm Deputy Commissioner for Emergency Preparedness and Response for the Virginia Department of Health. As such, I'm responsible for both our CDC preparedness funding for public health as well as our funding from HHS ASPR for health system preparedness.

We partner with the Virginia Hospital and Health Care Association for the HHS ASPR grant, and that's worked extremely well over the past five years, with regional planning and decisions made at the regional level for health care coordination and response.

Virginia has a unified public health system, so all of our local health departments are part of the state which has really facilitated our emergency planning. I have had this position for five years. In my former life I worked for the Virginia Commonwealth University Health System, Medical College of Virginia.

In addition to running the AIDS center, I'm trained in infectious diseases, I was in charge of telemedicine and actually started the telemedicine program which mainly served the Department of Corrections, so I'm well aware of the value of this technology which we link to the health department.

We do all our training through videoconferencing, and it saved us a tremendous amount of money as well as coordinating all our meetings. We're very involved in communications planning in the Commonwealth working an interoperability group at the state level and working with all our partners, both public and private, for emergency response.

In addition to all that, I'm also responsible for the Office of Emergency Medical Services within the Virginia Department of Health. There are many challenges that we face, and we're well aware the interoperability goes way beyond the

technology. We need a governance system in place.

There is no perfect communication system. As such, we've built an incredible amount of redundancy into our communication systems. Both in health care and public health we've worked very hard to link with emergency response groups throughout the Commonwealth.

This is a major challenge for both public health and health care to make sure that we have coordinated communications that work with all our emergency response partners, so I certainly look forward to working with this group on this major challenge.

MR. BUGEL: Thank you, doctor. Mr. Liekweg?

MR. LIEKWEG: Good morning, I'm Rich Liekweg, I'm the CEO of the University of California San Diego Medical Center. UCSD is one of five academic medical centers within the University of California system, and it's the only academic medical center in the San Diego region. Pleased to be part of this committee.

UCSD Medical Center has been recognized the last two years as one of the top 100 most wired medical centers and one of the top 50 most wireless. We have been fortunate to have fully deployed a

computerized physician order entry system across the two hospitals.

We are deploying an electronic medical record already in our ambulatory care, and in the next two years, so my experts tell me, we will have it rolled out across the inpatient setting. I think a little bit optimistic. We have completely automated our medication administration system as well to improve the quality and the safety of the care that we provide.

We also use telemedicine and provide stroke coverage across San Diego and Imperial Counties and have recently networked with our community clinics with our emergency rooms so that we can provide medical homes to our patients who unfortunately we see first and foremost in the emergency room setting.

I've been with San Diego for five years. I'm also Chairman of the Hospital Association for San Diego and Imperial Counties and sit on the board of the California Hospital Association and its Executive Committee. So as a state we are very interested in the work that this committee doing.

Prior to joining UCSD I spent 16 years at the Duke University Health System. My last position there was CEO of one of the county facilities that

also operated the EMS system in Durham County. I most recently obviously am coming from the firestorms in San Diego. Somewhat coincidental that this meeting was scheduled a week after that event.

We learned a lot from the result of the Katrina disaster a couple of years ago. We certainly learned a fair amount from the fires we had in San Diego four years ago, and a lot of that showed as we came together as a community.

The communications were extremely effective. So there's certainly some lessons learned that I'll be able to share with this group, things that worked well and still where we have some opportunities to deal with major disasters like that. So thanks for allowing me to be here.

MR. BUGEL: Thank you, and that's why we scheduled this. We had all the confidence you'd be able to put them out. Mr. Linkous?

MR. LINKOUS: Thank you, Mr. Chairman, it's a pleasure and an honor to be appointed to the committee. Appreciate it. My name is John Linkous, I'm the Executive Director of the American Telemedicine Association.

ATA is a membership based organization with members throughout the country, actually, throughout

the world, including medical hospitals, providers, vendors of telecommunications equipment, a wide variety of people involved in a very broad definition of telemedicine, which is really providing medical health communications using telecommunications, all to aid patient care.

ATA has been involved in both telecommunications issues and emergency issues for a number of years. Probably really starting accelerated after 9/11 where we were very involved in providing recommendations and support. You'll hear more about that later from our past president who will be speaking.

Many members of the panel have been members or are current members of ATA over the years including a couple of board members, so I feel like we're very well represented here.

My past life before ATA, I was involved in telecommunications consulting working with mainly the telecommunications companies and also working with the Commission on the original E-911 Report and Order and doing a lot of work in the cellular telecommunications area. A pleasure to be here.

MR. BUGEL: Thank you. Mr. McGinnis?

MR. MCGINNIS: Thank you, Mr. Chair. My

name is Kevin McGinnis, I'm entering my 34th year in emergency medical services. My day job has been EMS system building with such positions as having been a regional EMS Director for a nine county region in Upstate New York, moved to be the state EMS Director in Maine.

I've been an emergency department director and director of ambulance services in a couple of different locations. My night job has been a paramedic, and I still practice paramedicine when those few occasions I get to go back to Maine to do so.

I am currently the Communications Technology Advisor for the National Association of State EMS Officials, the National Association of EMS Physicians, the National Association of EMTs, the National EMS Management Association and the National Association of EMS Educators. It's a position that everybody is interested in, but they decided to consolidate it all under one person.

I've been very active for the last few years in EMS communications and have kind of been the EMS guy at a lot of tables involving communications interoperability. I currently am Vice Chair of the Executive Committee of the Office of Interoperability

and Compatibility at DHS's SAFECOM Interoperability Program.

I also work on a committee there on data communications and belong to the National Public Safety Telecommunications Council.

I'm very much looking forward to the tremendous opportunity that this brief experience is going to provide us to move emergency medical services communications along because I very much believe that as EMS has grown up as a system in the last 35 years and has gotten to the point where it can bring extremely sophisticated care to you in your home or on the street, one thing that we're doing the same way we did it 35 years ago is talking on the radio.

We have such a great opportunity to do so much more for our patients. Thank you very much.

MR. BUGEL: Thank you. Mr. Nagel?

MR. NAGEL: Thank you, Mr. Chairman. My name is John Nagel, I work for American Messaging Services. They're the second largest paging carrier in the U.S. I'm also here representing American Association of Paging Carriers. They are the paging carriers' association. I have an electrical engineering degree.

I've been in the paging industry for 27

years. The first 20 or so years I spent developing infrastructure products for the paging industry. The last six years I've spent working for carriers. I'm here to help contribute and possibly learn things that may also help. It's a pleasure to be here.

MR. BUGEL: Thank you very much. Dr. Nesbitt, have you had the opportunity to join us via telephone?

MR. NESBITT: Yes. I've been on since the beginning.

MR. BUGEL: Thank you.

MR. NESBITT: Yes. I'm Tom Nesbitt, I'm a physician. I have a Masters degree in public health. My day job is Executive Associate Dean of the School of Medicine at University of California at Davis. I'm also the Director for the Center for Health and Technology at UC Davis which houses our telemedicine program which has been in existence for about 10 years or so.

We have about 80 telemedicine sites providing care in about 30 different specialties including emergency medicine and critical care medicine. We also have worked with public health departments for distance education.

I'm also currently the Chief Scientist for

the Center for Information Technology Research in the Interest of Society at UC Davis, which is a research center researching the use of telecommunication and information technologies in a variety of areas including health care.

I'm currently working with the University of California Office of the President to implement the portion of Proposition 1(d) that deals with the development of an expanded telemedicine network throughout the University of California's system. Finally, I'm working with a statewide committee that's been formed by the Governor's office in response to the FCC Rural Health Care Pilot Program.

This group will be advising the University of California, if we are fortunate enough to receive that grant. Other relevant information is that I previously served on the National Advisory Committee on Rural Health under Secretary Shalala, and I also look forward to the work on this committee. Thank you.

MR. BUGEL: Thank you, doctor. Now we go to Mr. O'Brien who I think actually challenged Dr. Pressler for the greatest distance covered in order to get here coming in from Chile last night.

MR. O'BRIEN: Two weeks in South America,

but I came from a different direction. I'm with Iridium Satellite, I'm responsible for all that our system does and we do in the Americas, North and South America. Many of you know the Iridium satellite system is as we like to say truly the only system in the world that's capable of providing service to and from every point on the globe.

It provides voice, and fax and data service. The system has been widely used, heavily used after some of the major natural disasters we've seen such as Katrina, tsunamis, earthquakes and so forth.

We're happy to see that it's now becoming adopted and made part of the infrastructure by many of the first responders and emergency care organizations for applications such as medivac and asset coordination to a level of getting sort of vital sign information from the field to in front of those who are able to make productive use of it.

So I'm here, I think the contribution I hope I can make is we've lived and been very close to helping with these disasters, and I think we have a pretty good understanding of sort of how that all, the phases through which that goes and what the strengths and limitations are of the systems that are out there today including ours as well as others.

Before, Iridium I was with COMSAT from its inception. During the years we've built what today is called the INMARSAT system for mobile communications as well as the international global system, which today is called the INTELSAT system. So I'm happy to be here and hope I can help. Thank you.

MR. BUGEL: Thank you. Dr. Pressler?

MS. PRESSLER: Aloha. Thank you, Mr. Chairman, and members of the committee. My name is Ginny Pressler, I'm Executive Vice President at Hawaii Pacific Health which is the largest health care provider in the state. We're a four hospital system with three physician groups, about 18 clinics and about 1,000 other private docs throughout the state that are linked in together.

I believe the reason I was assigned this prestigious appointment was because I've been very outspoken in the state about our need for better electronic connectivity, trying to develop a regional health information organization in the state and other efforts.

Our four hospital system actually has electronic records throughout all hospitals, and along with Richard, I'm being told in the next year and a half we'll have everything connected up, hopefully

also with our physicians as well as hospitals, with computer order entry and full electronic medical records.

Our hospital has also been a leader in the state in working collaboratively with both the public and private sector. We're members of two collaborative groups, one called Holomua, which is an attempt to get all of the health care providers in the state connecting and talking to each other with their electronic systems, and the other is actually a grant with FCC for broadband connectivity of both Hawaii and providers in the pacific to have us all interconnected for better communications.

Prior to being at Hawaii Pacific Health I was Deputy Director at the State Department of Health, and I think that was the other reason I was appointed, because I have experience working with the public health sector and was there at the times of several of our disasters, so I'm very pleased to be here, and I look forward to working together with you.

Jonathan, Dale Moyen says hello to you. Thank you.

MR. BUGEL: Thank you. Mr. Raheem?

MR. RAHEEM: Good morning, Mr. Chairman, and thank you, Ms. Fowlkes, for having us here. I'm the

Branch Chief for Electronics and Communications in the Assistant Secretary for Preparedness and Response in Department of Health and Human Services. I'm going to actually see some of you folks on Thursday. The FCC and HHS is chairing a joint committee on public health response communications.

We have two primary roles, one is preparedness with the Hospital Preparedness Program and the Critical Infrastructure Preparedness for Health Care, and the response arm, the National Disaster Medical System, was returned to HHS in January of this year, so we have challenges such as electronic medical records in the field, and how we use that with our response teams and how that information then gets transferred to hospitals.

I am predominantly a communicator not a health care person. I've been doing this for many years. I was previously with the Peace Corps as FL Communications Manager worldwide and would hope to listen, and learn and contribute. Thank you.

MR. BUGEL: Thank you. Mr. Roskind?

MR. ROSKIND: First of all, I want to thank the FCC and the NTIA for their leadership in setting this up and specifically Mr. Bugel for his leadership in running and setting this up in such a fast and

efficient manner. Want to thank the rest of you for your service to your profession and to your country.

My name is Mike Roskind, I'm the Deputy Director of the Office of Emergency Communication and currently the Acting Director. I work for Secretary Chertoff who sends his best, along with Deputy Undersecretary Jameson and Assistant Secretary Garcia. They're all grateful for your service and want to thank you.

Office of Emergency Communication was stood up under a congressional mandate under Title 18 and modification of the 2002 Homeland Security Act to consolidate emergency communication activities between federal, state and local government including tribal activities.

One of our products is to be a national emergency communication plan, which my hope is to leverage the lessons learned and recommendations of this panel and incorporate the lessons from the Joint Advisory Committee into that national emergency communication plan. My background, I came from industry, most recently Wireless Facilities Government Services, which recently became Kratos.

I was also an elected city councilman for the City of Woodinville, Washington, and active in the

Association of Washington Cities and Suburban Cities Association in King County, Washington. My background before that, I spent 10 years on the street as a patrol officer for the Seattle Police Department and the Snohomish County Sheriff's Office.

Before that I was an electronic warfare officer flying the A6-Bs actually defeating communication infrastructure. I have combat experience from Operation Desert Storm in defeating the Iraqi air defenses and as an antisubmarine warfare officer.

My educational background includes a Master's in strategic planning from the University of Washington and a Bachelor's degree from the U.S. Naval Academy, which despite putting 52 points on the board Saturday managed to lose.

MR. BUGEL: I'll save the editorial comment on that one. We have to back up a little bit. Mr. Rogers, have you had the opportunity to join us on the bridge?

MR. ROGERS: I have. Can you hear me?

MR. BUGEL: Yes.

MR. ROGERS: Okay, great. Well, I thought maybe you were going to save us lurkers for the last. Shall I just launch into it?

MR. BUGEL: Go right ahead.

MR. ROGERS: All right. I'm Shawn Rogers, I'm the Director of the EMS Division of the State of Oklahoma Department of Health. I've been a paramedic since the Reagan administration, I've been an EMS Administrator since Bush one and I've been the Oklahoma State Director since late in the Clinton Administration.

I'm the Communications Chair for the National Association of State EMS Officials, and I'm delighted there to be working with Kevin McGinnis. I'm very interested in representing EMS in this excellent discussion, and I'm very grateful that we're having it.

EMS as a field, little has been heard from regarding communications outside the fire arena. I think it's very important that nonfire EMS be reflected. Most EMS throughout the middle of the county is nonfire, and those endeavors, mostly small towns, and private operators, and hospital based operations and so forth, have been little touched by national preparedness efforts thus far.

I'm eager to assist, too, with developing a plan to prepare for the exponential expansion of demand from the retiring Baby Boom Generation. So I'm

happy to be here and happy to meet you all.

MR. BUGEL: Thank you, Mr. Rogers. Ms. Sexton?

MS. SEXTON: Thank you. I'm Karen Sexton, I'm Ph.D. and a nurse by training. I've been in hospital administration for greater than 20 years including academic medical centers and Level 1 trauma centers. Currently, I'm the CEO for University of Texas Medical Branch in Galveston's hospitals and clinics. If you don't know where Galveston is, it's a barrier island that's 40 miles south of Houston.

We have one of the only BSL-4 labs on an academic campus, we have petroleum plants in Texas City and we're on the Galveston/Houston port channel. We're used to emergencies. Being on our island we serve hurricanes as well. I guess I'm here because I served as the incident commander for the total evacuation of our hospital first time in 114 years.

During Hurricane Rita we evacuated 427 patients. In that evacuation we used 100 plus ambulances, 32 helicopters, six fixed wing, and multiple busses. My frustration was that once we put our patients on the road we had no longer any communication with those vehicles as they tried to navigate the traffic situation in the Houston area and

get our patients to medical facilities.

UTMB serves as one of the largest telemedicine programs in the world primarily through their consults with our correctional care across the State of Texas. We are a large health care facility and serving multiple clinics across the State of Texas. We admit 41,000 patients to our hospitals every year and we do almost one billion clinical ambulatory visits a year.

I currently serve on the Executive Board of the Texas Hospital Association and on the Advisory Board of the Council of Teaching Hospitals at the AAMC. Following the hurricane evacuation I was asked to serve on the Governor of Texas Task Force to enhance Texas' ability to respond across the state, and in that role I served as the Chair of the Special Needs Committee.

I'm pleased to be here and do what I can to be better prepared to handle emergencies.

MR. BUGEL: Thank you very much. Mr. Traficant?

MR. TRAFICANT: Yes. Mr. Bugel and Ms. Fowlkes, thank you for your leadership and I appreciate the opportunity to serve with each of you. I'm Jim Traficant from the Harris Corporation.

Harris is an assured communications and information management company.

My background comes from I'm the Vice President of our health care solutions business. We do work with the NIH, the CDC, and Harris does an extensive amount of work managing networks at the national level and the ability to provide first responder communication support.

We provide a nationwide network through the FAA, some of the largest networks in the intelligence community, also with Defense. During Hurricane Katrina we stood up a microwave communications network in response to the devastation there for the communications. We also have the capacity through our broadcast business working with PBS stations to avail communications bandwidth for rural telecommunications.

I came at this, though, not as a medical professional but as a patient. My passion for serving on this committee is a result of two liver transplants. Having relied and had my life at stake for emergency medical responders I really appreciate the service that each of you have provided. It has made a difference in my family, in my life personally, and I'm looking forward to contributing to this committee.

MR. BUGEL: Thank you very much, sir. Mr. VanCott?

MR. VANCOTT: Good morning, Mr. Chairman, members of the committee. I am Carl VanCott, currently the Communications Specialist for the State of North Carolina Office of Emergency Medical Services. I've been with the State of North Carolina for 33 years now.

The principal product that we're working on currently is a statewide voice integrated system connecting all hospitals, public health departments and EMS responders. This is a -- what's the correct word they use -- it's an analog system, anyway, and we are looking at now integrating that into a statewide digital 800 megahertz trunked system which also will be statewide.

Prior to joining the State of North Carolina I worked in private enterprise, private industry, in developing radio telemetry equipment for paramedic applications. Worked with the Los Angeles County Fire Department and was instrumental in putting in some of their radio telemetry equipment, worked with Gage and DeSoto on the television program Emergency and I have evolved through many different systems and working with different people.

Chairman of the EMS Communications Committee for Public Safety Communications Officials, past Chairman of the National EMS Committee on Region 31 800 Megahertz Planning, I have been a member of the College of Fellows for the National Association of Emergency Dispatchers and past President of the National Academy of Emergency Dispatchers, currently Committee Chairman of the Subcommittee on EMS Communications for ASTM, and I've had the privilege of working with several of the people around this table before and I'm looking forward to continuing our work. Thank you.

MR. BUGEL: Thank you, sir. Mr. Wilgis?

MR. WILGIS: Yes, thank you, Mr. Chair. John Wilgis with Florida Hospital Association. I want to take the opportunity to thank the FCC and the NTIA for calling this joint committee together to address the important needs of interoperability in emergency medical communications. I am the Director of Emergency Management Services for Florida Hospital Association which is a member association of hospitals and health systems for the State of Florida.

My role is a little unique in that I represent all Florida hospitals to our state government officials, that being the Department of

Health, and specifically, the Offices of Public Health Preparedness, the Department of Emergency Medical Operations and the Division of Emergency Management.

I have a background and I'm a respiratory therapist by trade but went on to get my MBA in hospital administration, and I have a diverse clinical and administrative background in the hospital world and then came over to FHA after some work I was doing in the realm of emergency preparedness and planning.

My real interest here in working with this group is how can we integrate, coordinate, all of the various diverse systems of voice and data communications for all of our health care systems, that being prehospital and hospital? In the State of Florida it's a huge issue, and we would like to work with the group and work with the committee to prepare for improving this across our country.

I'm happy to serve on this committee. I just thank everyone. I look forward to working with you all. I hope we can accomplish a lot in a very short period of time. Thank you very much.

MR. BUGEL: Thank you. Dr. Wuerker?

MR. WUERKER: Good morning, my name is Chris Wuerker, I'm an ER physician here in D.C. I work at Washington Hospital Center, which is a large 900 bed

facility here in the District. I've been involved with emergency preparedness for the hospital, D.C., and the national capitol region. I'm also the Program Medical Director for MedSTAR Transport.

We're a five helicopter Medivac provider that operates throughout the mid-Atlantic region. Perhaps I can contribute a perspective from the ER and perhaps from the air.

MR. BUGEL: Thank you. Also joining us on the phone is Eric Werner. Eric, are you still there?

MR. WERNER: Yes, I am, Jim.

MR. BUGEL: Just introduce yourself to the group.

MR. WERNER: I will do. Thank you. This actually comes at sort of a very opportune time because, as I mentioned, regretfully, I'm going to have to sign off momentarily. My name is Eric Werner, I'm a Senior Advisor to Assistant Secretary for Information and Communications John Kneuer at the Office of the Assistant Secretary for the National Telecommunications and Information Administration.

I didn't jump in at the beginning, but before I leave I would like to take a moment on behalf of Assistant Secretary Kneuer and Deputy Assistant Secretary Meredith Baker join in the remarks you made,

Jim, and those that Lisa made at the outset to welcome all of the members of the committee and to thank you all for your service.

In particular, Jim, I wanted to thank you on behalf of the Assistant Secretary for taking the wheel to navigate the committee through its important work and what will be very fast moving waters over the next 10 to 15 weeks.

As you so eloquently summarized earlier the mandate of the committee underscores the critical importance that our public health system and the emergency medical services sector in particular play in maintaining the well-being of our nation generally in elevating our overall state of preparedness to enable us to respond to emergency events regardless of their source or scope.

The work of the committee compliments a number of ongoing initiatives at the federal, state and local levels in the areas of medical communications and information systems, public safety and emergency preparedness communications and other major emergency preparedness activities.

Certainly we at NTIA are very familiar with this having just recently issued about $1 billion in grant money for public safety interoperable

communication systems, but complement as well a number of the initiatives that you mentioned in your remarks that are underway, both at our fellow agencies, HHS and DHS, and elsewhere in the government.

The work of the panel is going to be very important to helping I think to rationalize, and harmonize and coordinate many of the activities that are underway across that spectrum and to help bring them together.

The breadth of expertise that is represented with you in the room now, and on the phone, and the members of the panel, and in those who are not on the panel but who have graciously and generally offered their experience and their expertise in support of the work of the committee I think portend great success for this panel.

The work plan that you've laid out I think is a formula for an efficient approach to important issues, and we at NTIA will look forward to working with you and in support of the committee and its work over the coming weeks. I will look forward to hearing how the rest of the meeting goes.

MR. BUGEL: Thank you, Eric. I apologize for not deferring to you earlier. Probably around the fourth meeting I'll get all this right.

MR. WERNER: No, no, no, no. Don't take it in any way. The circumstances aren't optimal unfortunately. I regret that I couldn't be there in person with you today. I would like to acknowledge the presence of my colleague, David Murray, who is also a Senior Advisor for the Assistant Secretary, who is joining you in the Commission's meeting room today.

Unfortunately, I am out in Los Angeles attending a meeting with the Assistant Secretary on another matter and preparing to go into another meeting on that shortly. I will look forward to hearing how the rest of the meeting goes, and am very interested to hear the discussion on the forthcoming work of the committees and the subcommittees.

MR. BUGEL: Thank you very much.

MR. WERNER: Thank you.

MR. BUGEL: Appreciate it. A couple more introductions. I would also like to introduce Jean Ann Collins from the FCC who will be working with us. You will probably very likely receive emails from Jean Ann.

The other person that works with me is Colleen Meisenger -- Colleen -- the person that you probably will receive all the emails from because I'm incapable of getting them right the first time, so

it's not spam, it's coming from us. They are responsible for doing a tremendous amount of work in a very short period of time in conjunction with NTIA and the FCC in order to get this thing off the ground and running.

As I said before in speaking to you on the phone I was very impressed with this group and was very impressed when I looked at resumes, and I'm even more impressed now. In your package, also, you've gotten email, is basically the three working groups. It's about the fourth, fifth, sixth document back. These are the Emergency Medical Group, the Public Health Group and the Technology Integration Group.

The chair for the Emergency Medical Group will be Mr. McGinnis, the chair for the Public Health Group will be Mr. Linkous and the chair for the Technology Integration Group will be Mr. Roskind. They are right now currently in the process of seeking for additional leadership inside the working group. Please familiarize yourselves with who is on the committees, on your working groups.

You have the contact information. There is obviously going to have to be a tremendous free exchange of information going between the working groups and within the working groups. A lot of this

work is going to have to be done via conference call, via email. We will be lining out -- I guess let me back up.

What the Project Management Working Group hopes to have in about a week is an outline of what we think the direction of the report. That outline will be discussed with you all, and we will move forward from there. It will be a work in progress. Basically, we do not have a lot of time. We have to rely on a lot of work that's been done.

You all are very familiar with the existing bodies of work out there. So after this meeting I'd like to spend some time with the chairs, and we can discuss that further.

With that, I think now I'd like to turn to our first guest speaker, which is David Aylward with COMCARE. Let me also just add that our opportunities to get together are going to be rare. We may get together according to the schedule. Also, in your package is a tentative schedule. As Mr. Linkous pointed out to me you've got to take your breath after you looked at it, but, you know, 90 days is 90 days.

So if there are groups that you would like to present testimony and witness to the group, to the general body, please submit those through the working

group chairs so that we can vet that process and potentially make arrangements for that.

Mr. Aylward, welcome.

MR. AYLWARD: Thank you. My name is David Aylward. I know many of you. Nice to see all of you I've known and worked with, nice to meet others of you. A little bit of personal background. This fall is my 30th anniversary in communications and IT policy, and more recently deployment. COMCARE that I represent I helped found 10 years ago, is an emergency response advocacy group.

We represent about 100 organizations, many of which are around the table. The perspective that we have, our goal in life is to do what you're talking about doing. I must say that I'm delighted that today in three different cities there are major events going on on critical topics related to this.

Harris Corporation is sponsoring MILCOM in Florida today where my colleague, Judith Woodhall, the Executive Director of COMCARE, is speaking to an audience of uniforms about what they call CIMIC. I didn't know what CIMIC was until a while ago, but that's civil military cooperation. The military needs to be interoperable with us folks, and so they're focusing on this issue.

Today in Chicago there's a group called HITSP that's meeting. Those of you who come from the hospital world and electronic health records, you know what HITSP is all about, but that's where I'm going after this meeting. To go from a time when kind of yelling about hey, don't forget emergency medicine to a day when there are three major events, it's very gratifying, so I'm delighted.

We thought that it would be helpful to break the talking a little bit by starting with some video entertainment since one of the hardest things we have found in this space is to give people a vision of what's possible. If they don't know what's possible then they don't ask for what's possible, and therefore, they take what the vendors offer them.

The vendors tend to offer them stuff that may work very well for their current function but doesn't advance the ball. We and some of our friends have tried to put together visual demonstrations of what the future might look like, and so if you'll permit.

We're not a corporation, so we don't have a huge production so you may see a few rough edges here, but this is a little six minute movie about what the future might look like.

(Whereupon, a video was shown.)

MALE VOICE: If we can get to victims earlier we have a much better chance of saving a person's life. We need to know the location of that incident, we need to know the magnitude of that incident.

MALE VOICE: Time can make all the difference in the world. It can be the difference between life and death.

FEMALE VOICE: The sooner we get to the incident, the sooner we can control it.

MALE VOICE: We've got a limited window to make a difference.

MALE VOICE: To be effective during an emergency responders need the information they need when they need it. This means utilizing modern information technology for easy, rapid access to essential data, data that can be shared and enhanced throughout the response continuum creating an environment of informed emergency response.

Emergency responders are the critical links in the chain of survival. Unfortunately, a wealth of information that would help responders perform their duties far better is beyond their reach. More and better information empowers responders to perform at

new levels. This information exists, but it resides on the opposite side of a technological divide.

The emergency communication center of the future will bridge this gap allowing them to access and share critical information that just may save your life. The current 911 system exists primarily to receive incoming telephone calls and dispatch traditional first responders. Critical victim and incident information often exist in electronic form, but 911 dispatchers don't have access to it.

FEMALE VOICE: We have the technology, we just need to connect the dots.

MALE VOICE: A car crash resulting in severe brain injury demonstrates the information that is available today electronically but not available automatically or on demand to dispatchers.

This information includes exact incident location, crash data, vehicle make and model, ambulance and paramedic availability, hospital bed and medical staff availability, status of air transport services, vehicle extrication information, injury prediction tools, personal health records, hospital records and traffic advisories.

MALE VOICE: Right now we're having to have an individual, a dispatch officer, calling people in

sequential fashion trying to get a hold of the people they need, and that's time.

MALE VOICE: PSAPs will become emergency communication centers assuming a vital, ongoing role in emergency response processing a diverse wealth of information. The PSAP of tomorrow will synthesize information from sources ranging from text messages and photographs captured by cell phones to patient histories obtained from electronic health records to telematics crash data to injury predictions and care records.

MALE VOICE: We need a 411 for 911. Everyone that needs to respond to an incident can see what it is, where it is and what kind of response needs to be given to it.

MALE VOICE: Let us paint a vision of that future. After driving all day a woman falls asleep at the wheel. She hits the windshield with enough force to lose consciousness. Upon impact the car's telematics system immediately transmits over a commercial wireless network a voice call, exact location and detailed crash information.

MALE VOICE: Currently, we have to call on a radio and wait for dispatch to come back with that information.

MALE VOICE: Crash location, deceleration rate, direction of force, airbag deployment, vehicle make and model and other relevant data are automatically assembled at the telematics call center. The voice call goes to the ECC 911 center along with this package of information.

The data is also immediately delivered to other agencies that have registered to receive it such as EMS, air transport, the transportation department, the police and the closest trauma center. The crash data is then automatically fed into a new emergency medical dispatch EMD protocol within the 911 CAD system.

Now, EMD combines real data with the answers to questions and it uses the urgency algorithm to combine engineering data with observational information to predict the probability of serious injury. The initial injury prediction based only on the crash data is not too severe. An ambulance is dispatched and the EMTs review the injury predictions on the way to the scene.

At the same time, the 911 telecommunicator receives the name of the owner of the vehicle from the telematics service provider. She gains access to the driver's personal health records to which the owner

granted advance permission. She is alerted that the patient is currently taking the blood thinner Coumadin.

In this case when adjusted for the driver's age, gender, consciousness and Coumadin use the dispatcher sees that the urgency algorithm is predicting a high probability of brain injury. Within a few minutes we now have a very different kind of emergency.

Life saving information in hand, the telecommunicator calls for an emergency air medical transport crew to be activated to airlift the passenger to a trauma center due to the probability of brain injury. Brain trauma protocols are downloaded to both the ambulance and air responders along with instructions to check for internal bleeding due to the blood thinner.

The brain trauma team at the center is alerted. Simultaneously, fire responders now know the make and model of the car. The crash data predicts extraction equipment will be required, so they grab the jaws of life. In route, they access detailed vehicle structure data via the vehicle rescue database and familiarize themselves with hazards in the car such as electrical currents and air bag mechanisms.

They are ready to start cutting as soon as they arrive. Fire responders rapidly extricate the victim. The EMTs stabilize her. The air medical team arrives and air lifts the passenger to the emergency department with the specialized brain trauma team.

At the same time, the crash victim's emergency response electronic health record is expanded with voice to text entries from responders and automatic entries from devices such as blood pressure and pulse ox monitors. All relevant patient data is sent electronically to the waiting hospital staff.

The operating room is being prepared. This information is fed into the hospital's patient system before the patient arrives saving the hospital time and expense. Because incident and patient data was collected from the moment the crash occurred hospital staff is able to provide rapidly informed care.

Where once emergency rooms admitted patients as blank slates these properly equipped doctors have a wealth of important information about the patient. For example, doctors are able to access a history of changes in the driver's Glasgow Coma Scale Score since the first call to 911.

These trend lines indicate the need for a

fast operation to relieve bleeding in the brain. The significant changes in consciousness are being quickly detected.

MALE VOICE: With a trauma case the time can make all the difference in the world. It can be the difference between life and death.

MALE VOICE: Because of the responders, their skills and the new information they have the victim receives rapid and informed response. She survives with no long-term brain damage. The system worked not just in this crash, it got smarter and better prepared for the next emergency.

Throughout this scenario external information sources such as telematics, personal health records and the vehicle rescue website as well as the actions of responders contribute data at various points along the continuum of response. Data does not remain in one place.

It flows through the chain of response from 911 to EMS to hospital based care improving emergency care at each of these points. Ultimately, this information is used to improve response processes through protocol development and research, savings lives along the way.

MALE VOICE: This project is about getting

better information to the right people quickly.

MALE VOICE: Whether the response is to pandemic flu, hurricanes, heart emergencies or terrorist attacks, critical information needs to easily flow through the continuum of response allowing responders to provide prompt, high quality, life saving emergency care.

The question is not if an emergency will happen on your watch, it's when and how will you handle it? Will you have modern data and voice communications or will you only be able to make telephone calls. Information and evidence based decisions represent the next generation of emergency response. Get ready to be informed.

MR. AYLWARD: So that's our vision. It tracks very close. Last night I read an article Kevin just wrote in an EMS magazine that looks like he was kind of the script writer for this. I think the issue that we face is, you know, you might disagree with some of that, but how do we get there?

The pieces that weren't really described there is if you have that kind of a system it's very easy for public health to extract out of it the data that they want for syndromic surveillance, and just as importantly it's easy for public health to put

instructions into that kind of a system into a 911 protocol saying if somebody is complaining of chest something ask them if they've been abroad in the last two weeks.

If they've been abroad in the last two weeks ask the following four questions. So there's a vision there that I hope you ascribe you to. We are working on some very specific issues related to that vision which we would be delighted to put in front of you, be delighted to have you involved in individually or as a group. Our most active ones are on patient tracking generally.

I'll describe that a little bit. We are working, a lot of work, on standards. We are working on the things in the middle that are necessary for that kind of a system to work. Let me step back for a second and offer a couple of comments on one of the problems with emergency medicine, and IT and public health is that you're kind of the weak sisters or the poor sisters of the emergency world.

I've been at this for about 10 years, and one of the things that is always the case is that there's a big boys club and then there are other clubs, and the medical people tend not to be part of the big boys club. That's unfortunate because

emergency communications used to be thought of historically and in this building as a spectrum issue, as a radio issue, and it is certainly that.

That's very important, but you're all here because it's much more than that. One, you're part of the radio world, but also, you're part of the information world. The world hasn't caught up to that, so we tend to be excluded, whether it is from the committees that are doing the planning, from the state plans themselves.

There's a lot of talk about the billion dollars that's going out the door. I'm reading the state plans as to how that billion dollars is going to get spent. There are not a lot of major representation.

There are some individual states that are doing a great job, there are some other states that have included some people like you or people at this table, but for the most part there is not what I would call an integrated planning process that includes all of emergency response including emergency medicine, either in the planning or in the spending, nor is that money being focused on interoperability.

I think one of the messages that we all get is clean up your own house first, and within the

emergency medical world I think we have our own kind of stovepiping that we've been able to do. CDC spent a lot of money on emergency communications on one specific thing, health alert networks.

A lot of money was put out the door three, four, five years ago to put up one way systems. A lot of money is being put out the door by HHS to do another stovepipe which is to pull data back in from hospitals so it can be analyzed to look for trends, a one way stovepipe system.

Other broader homeland security grants, CDC has been funding public health. Public health was delighted to get some funding for the first time from the federal level in a big way, and they certainly weren't going to share it with EMS.

There was HRSA throwing money out the door to hospitals who were delighted to get it and certainly weren't going to share it with EMS much less the EMS cousins. I know one folks, you know, they were told to go off and get their own program, which they did, but they couldn't get it funded.

The people doing private stuff are just kind of, you know, as Lisa was saying earlier, they're not really invited to the party at all. Part of this is politics. I mean, part of this is EMS is not well-

organized, emergency medicine is not well-organized. These are all new professions.

They haven't had decades to get together and form political action committees and learn how to influence the political system. Enough already. It's time to get over that, and get organized and to have our own centralizing forces because even within these professions there's a commitment to diversity that goes beyond what it needs to be.

The final piece I'd say about that is, yes, Jim, there's a lot of focus on health IT now, but interestingly, it doesn't include what you're talking about here for the most part. It's hospitals and public health to some degree, it's not emergency. That's changing a little bit, starting to change this group. I think it can make a big difference.

In the funding silos, what is the federal government doing about this, unfortunately the federal government for the most part is reinforcing those silos. I already mentioned we represent law enforcement to some degree and fire to some degree, so I'm not picking on them.

I just want to point out that emergency response is a big integrated whole, and if you focus on this from the perspective of the public, like Jim

was saying he needed help one day. I spent the last three weeks at Duke University Hospital, my wife decided to attack a floor with her hip and the floor won.

If you look at this from the public's perspective they don't think of it in terms of domains, they think about it in terms of a response system. When you look at it from the federal level or the state level, what are we doing? Well, one thing we're doing is Congress in its wisdom said well, 80 percent of the money at minimum should go to the locals.

Well, if you're building IT and communications networks that's just wrong. You shouldn't do that. I mean, for other purposes that's right, but where we need integrated networks you shouldn't do that. Where in the federal government is the integrated emergency response program for all organizations?

I hope it's you, Mike. I hope that's going to be you, but it hasn't been up to this point. If you're into public warning you go to one place and FEMA, if you are into radios you go to a different place and if you're into information analysis you go to another place and where is the focus on the center.

I skipped most of this talk about what's wrong just to focus on what we think we should do about it. We have worked this problem for a long time. When I say we, our members are we. We've thought a lot about it, and we think you can break it down in some parts.

Each of the parts there's a lot of work has been done, and so I hope this group with your short schedule will really try to validate or un-validate what's been done in a number of areas. I think those areas are transport, standards, applications, enterprise services, core services and economics and funding.

A lot of work has been done on some and almost no work has been done on others. On transport, the most important thing I think you could contribute is to tell emergency medicine and public health to stop trying to be special. Just be like everybody else. For transport purposes, for network purposes, the last thing you want to do is to have your own network.

The last thing you want to do is build another stovepipe. You don't need your own network. You want to have a network that everybody else is on so you can share it. It's much easier to share

information if you're all using the same emergency response network, and using international standards hopefully and using that wonderful Internet Protocol that everybody can talk in.

At the standards layer part of that is true as well. You don't want to have your own standards. Hopefully you're using other peoples' standards, like TCP/IP, and SIP and the other voice over IP standards. It's at the application layer where there's some specialness to what each of the domains is doing, but up to this point we haven't kind of broken those out.

Whether we are fire, or we're police, or we're EMS, or we're hospitals, we tend to talk about the whole thing as if it's ours and then ours will meet theirs. What I'm saying is at the transport layer that shouldn't be the case.

If you then think about this as an enterprise, you think about if you were General Motor and you thought about look at the world the way they have, they haven't just tried to link all General Motors facilities, they've tried to link their suppliers and their customers.

So if you think of this world we're in as an enterprise with emergency medicine being a critical part of a bigger enterprise you'll start looking at

the things in the middle that are necessary to run the enterprise, and that is a big gap. It's one we care a lot about, we spend a lot of time on it, we have some processes going that we'd like to invite you to validate or kick around, and I'll talk a minute about them.

The last one is one that I don't think anybody's done anything about, and that's economics and funding.

So the last thing I'm going to come to is to suggest to you the major contribution of this group could be to launch some analysis because at the end of the day we can talk all we want to about saving lives, but the people making the decisions here are writing checks and we need to show them that the checks they're writing make sense and are being done in a way that either will produce a return on investment or are justifiable.

I already talked a little bit about this slide, but in thinking about what transport is I think architecturally you want to announce that each part of the people represented here is nothing more than a node on the network. You're an important note. You can be a really important node, or a kind of important node, or a not so important node if you're a towing

company, but you're still a node.

Architecturally there are a lot of you. In fact, there's 100,000 emergency agencies in this country before we get to the AT&Ts of this world, and the television stations and the others who need to be in it. If architecturally we can think about them all being the same so there's agency in, it's a lot easier to figure out how to have interoperability and share information.

That's not to say that everybody has the same rights at all, but architecturally you can link them together. Second, if you look at agencies first there's already fiber everywhere thanks to the exuberance of the end of the last century. We got lots of dark fiber in the ground all over the place.

Yes, there's a few places way out in rural America, but most places are close to fiber, and indeed, most places are close to private networks owned by states, or private networks owned by cities, or private networks owned by the DOT. There's a lot of network capacity out there. We just need to get agencies to connect to it.

It's not that hard, particularly if we get people to focus on sharing networks. In Indiana, the 911 people have put together their own statewide

network. Great idea. They've really cut their costs. But why 911 should have a statewide network when they use about this much capacity makes very little sense.

All emergency response agencies in that state would make a lot more sense and would cost this much more. Those networks need to be run at a much higher level than they are now. We have a phenomenal communication success story in this country. It's called commercial communications. We should look at that and copy that.

They do not run local networks, they run regional and national networks. That's what we should be doing in emergency response, and you can't do that as a single domain and you can't do that on a local level. Finally, I would suggest that we should follow Morgan. Some of you know Morgan O'Brien. He's spent a lot of time in this room convincing the FCC of some radical ideas.

What Morgan did was basically single handedly revolutionize emergency communications. Up until Morgan O'Brien came in with his Cyren Call proposal a little more than a year ago we did emergency communications one way. We did it all locally. We gave out the goodies that the FCC hands out as spectrum, incredibly valuable stuff, and we

used to give it out locally and not even just locally.

We'd say you're the local police, you get some, local fire gets some. Morgan came up with this plan, and without going into the gory detail because they've cleaned the blood off the rug here, a year's worth of lobbying and fighting, but we now have separate content from carriage. We're just talking about a network.

He's not talking about what goes over the network. It's national. The new public safety network is national. The leaders of public safety, instead of worrying about running a network, how to run a network and who owns the network, they're not owning it. What they're doing is setting the requirements for it, which is terrific.

That's exactly what they should be doing is setting requirements. Morgan got a process going that knocked down the wall between public and private. We're going to share spectrum between public and private, which makes it a whole lot cheaper for the public folks to be on it, but because of the wonders of IP they'll be able to have higher rights when they need the higher rights.

Incredibly, the other neat thing about that is there was a time when in the wireless area public

safety had the best stuff, they had the cutting edge stuff, and that passed about 15 or 20 years ago. There are now 300 million users in the United States of wireless phones or so, a billion worldwide.

That R&D machine is cranking out new stuff all the time, and Morgan has come up with a plan that the benefits of that, both in terms of R&D and the economies of scale and purchasing, are going to accrue to the emergency response community in this broadband network.

So thank you, Morgan, for doing that. He talked a handful of public safety leaders into supporting him and he couldn't have done it without them, and so they did that and we should copy it. We should copy that model for everything else we're doing. I commend it to you, but let me be very clear I'm only talking about networks, I'm not talking about information.

Control of information should be local. How the information gets to places is regional and national. What you do with it -- emergency response has always been local and it should stay local. Standards, one can go to sleep on standards very fast. The point I would like to leave you with here is that there needs to be a major effort by the emergency

medical community to link to the nonmedical emergency communities to share some standards.

If you don't do that then you can't communicate about incidents. Police, and fire, and transportation, and emergency managers, all those people have a lot to say to you and you have a lot to say to them about how a response gets handled. So the DHS process that Kevin, and I and some others have been involved in of producing data messaging standards across all domains is a terrific thing, and it needs to go forward.

There will be a standard voted on early next year called HAVE that will report between 911 and hospitals how many beds you got, what specialties you have available, what the status of the hospitals is. There's a perfect example of what I'm talking about. That effort is funded at a level that is an embarrassment. As a taxpayer I'm embarrassed by.

I'm on the board of an organization and we just paid for consultants to move that process forward because DHS wasn't putting the money behind it. So I hope one of your recommendations is that there be a serious effort in this all domain field behind a good program that is just ridiculously underfunded.

One that is not underfunded is the one we're

involved with with HHS on the HITSP standards. They got a lot of people, a lot of emails. I mean, it just chews up hours a week where they're trying. What they're missing there is people like you. It's fascinating.

As they expand into the emergency side of electronic health records and start doing what we've been looking for for patient tracking, which is standards for patient tracking, there are not a lot of emergency people at the table. A lot of hospital people, lot of public health people, not a lot of emergency people.

So there are actually today, and tomorrow and the next day in Chicago a lot of emergency people, so I think we've kind of fixed that problem. Last point on standards is there needs to be some common dictionaries. Person is a word that goes across all domains. Identity is a concept that goes across all domains. You need to know identity for your purposes, cops need to know it for their purposes, Red Cross needs to know it for family reunification purposes.

We need some words that go across all domains. Again, there was an effort to do that called NIEM at DHS, again, underfunded, again, needs to cover everybody. There need to be significant numbers of

people like you or your organizations in that process. So it's a basic plumbing issue. People bow to standards, but it takes work.

One final thing is you cannot expect the emergency professions to participate unless they're funded. These standards we've got to get done fast. The federal government two years ago made a commitment with us to hand money out to Kevin's group, and the 911 group and others to pay their airfares, to pay their time to participate.

Not to pick on Harris, but Harris has 50 people who do nothing but standards in different areas, and they go to all these meetings. We need to do that for the emergency response as well. I just threw this up because we spend all of our time in the industry talking about the top line.

Everybody talks about computer aided dispatch systems, or emergency operation center, or run report, you know, what's the right PDA to record the information or how do we get traffic data? A lot less attention gets spent as you go down and none pretty much is getting spent at the bottom.

The reason is the more you go down the less individual value it is to a domain and the much greater it is to the whole, that is there is a line of

business service called NLETS. The cops figured out they wanted to share warrants. Okay, they've got a service to do that, but imagine a mapping service that's shared by everybody.

If you measure total cost of ownership you'd save a hell of a lot of money if everybody shared a GIS system, but there's nobody in charge of everybody so it's harder to measure those savings. Similarly, you get to the bottom and you start talking about core services, shared identity rights management.

That would be a huge step forward in patient tracking to be able to know what identity, but also in radio interoperability. So those bottom services are ones that we think are worth focusing on. IP. We need to get over the debate about IP. There is still pockets of fear about InternetPprotocol. I don't know why.

If it's good enough for Wall Street and the Department of Defense it's good enough for me. If it's good enough for the rest of the world it's good enough for us. We need a common language, and the world has produced one for us. It's called Internet Protocol, so let's just use it. Every telephone call that originates on GSM, or CDPD, or, you know, wherever it is it's converted into packets at some

point to move around.

I don't know why we don't just do that for everything. Radio interoperability. Radio operability is a very important issue. You can't function as a first responder without a good radio. We ought to address that problem. If you need a radio, we ought to buy you a radio. But that's not interoperability and it has very little to do with interoperability.

If we want interoperability fast and cheaply what we need to do is to look at the landscape and see that Lisa does not carry a $4,000 radio on her hip, and she never will I don't think. She probably carries one of these. Other people sit at desks with telephones. The new state police P-25 radio system is equipping the state police in North Carolina with Viper radios, and they're delighted and that's great.

Maybe Carl's going to get a few for his people. That's fine. They've got those. I'm from Charlotte, and I can tell you the communities around the Charlotte area can't afford those radios, so they're going to stick with what they've got for a while. So how are we going to tie all those together in the next year?

There's one way, and it's simple: IP. We

can do this if we focus on interoperability. The military is doing it in Iraq and Afghanistan. We can just copy them. Now, is that perfect? No. Does it address operability issues? No. But if we convert everything at IP we can do lots of interesting things.

I forced myself through a calculus of three year per user cost of interoperability, and if you do it with IP you're in the range of two to three percent of what it takes if you buy everybody a new radio. Now, you're not going to buy everybody a new radio is the point.

You're going to buy a new radio for the person that needs a new radio, the state patrolman, the fireman. You're going to buy them a new radio. There are a lot of you that need to interoperate, not the least of which is the public needs to be able to call in. We need to recognize that everybody is on different timetables.

We're not going to get everybody. Even if we had total money, any amount of money, it would be spent on the different. So everything over IP is the mantra that's coming out of DOD, and I think it's a pretty useful one. Core services. Simply, we've got papers out the kazoo on this. I'm not going to spend a lot of my time on it.

It's just if you want to communicate with a lot of parties you've got to know who the parties are. You've got to have a registry of who the heck the parties are and what information they want, and we don't have one. We designed one. We have a process going forward with NENA. and with the State Fire Marshals and with OGC to trial that.

We'd delighted for you to validate the requirements we're using and see if they apply to you. Similarly, you can't have everybody interoperable and not have a rule book. You've got to have rights management, you've got to have access control. What is Karen allowed to do, not Karen, but what is the University of Texas, Galveston, allowed?

What messages are they allowed to send? What messages are they allowed to receive? You just need that, and nobody's working on that. Those two issues are huge and need to get solved. If you have the software to do that then you can deal with the real issue which is force leaders to get around the table and tell you what the policies are.

All I was just talking about before is you've got to have the software. Now that you've got the software you can get people in a room and say okay, what is our policy here in Winchester about

sharing crash information? Instead of somebody saying well, we can't share because we don't have the systems, you can say yeah, we can share now.

So when somebody says well, they can now say they don't want to share, okay? They can say that, and they can record that policy. Much more likely you can put together systems. A good example is in the State of Virginia, Virginia hospitals are willing to share detailed information about their bed availability and service availability in a disaster.

They're willing to share that with Lisa, and with their colleagues, and with 911 and everybody else. As soon as that disaster is over they are not willing to share at all. They're willing to share if their emergency room is on surge and that's it. Okay, that's fine.

All we need is a rule book that says push the button when that incident happens, and the data can now flow. We don't have that. If we get that going, then we can start having a really interesting discussion of how would we do things differently? I mean, the neat thing about that little movie is we did something different.

An aircraft got sent before there was somebody on the scene saying we need an aircraft. So

you experts in the field can start talking about the neat new things that we could do in the future. Peter Letarte who is a brain trauma person, who you could tell a brain trauma person worked on that video, has all kinds of ideas as to how he can change his practice based on this.

Then over time we can start refining. Carl has spent a lot of his time on emergency medical dispatch upgrading the protocols. We can do almost real time education and upgrade of protocols with this kind of a system. So bottom line, please treat safety as a virtual enterprise. Please call it a virtual enterprise, please call it a safety enterprise and do total cost of ownership as if it were one.

It isn't going to be one, it's going to have a lot of different owners, but you folks coming together can treat it as one and say let's look at this thing overall. Then, separate the network from the data going over it. Don't let somebody say well, we've got to have a network for alerts, and then we've got to have a network for weather or we've got to have a network for HazCollect.

Then, think about interoperability and all its forms. Don't let somebody say well, we're just talking about interoperability of voice for first

responders. No. It's much bigger than that. We're not just talking about wireless, talk about interorganization. Look at the legislation.

How many times do you see in the legislation you can spend the money on equipment? Well, my small agency has 20 employees and we can't afford equipment. What we would like to do is to buy a managed service. We would like to pay a monthly subscription to get this service, whatever it is, from a company.

According to Congress, most of the laws that Congress has passed, I can't do that. I have to buy equipment, which guarantees that small agencies either don't get what they need or that they buy something that the vendor told them to buy that's more expensive than it needs to be.

Perfect example is radio over IP. Radio over IP is terrific stuff, and it ought to be all over the place. Most of the departments out there can't take that piece of software, download it onto the server and manage it. I was having real trouble getting the spacing on my slides done at 2:00 this morning, I'm going to manage a radio IP? No.

This guy could manage it. This is Stacy Black from AT&T. Phone companies do that, IT companies do that and let me pay a couple hundred

bucks a month for a subscription. I mean, we need to open up how we do this. Planning. There is simply no reason why we're funding with our tax money state emergency interoperable committees that do not have full representation from every emergency response profession sitting on them.

The new laws are starting to be more inclusive, but in the field they are not. The reality of this is that there is some representation, but they're not full. Plus, you know, at the federal level DHS and HHS need to get together, and they need together with -- Drew's running the 911 project.

Next generation 911 is as relevant to this topic as anything I can think of. Hopefully it's not going to be next generation 911, hopefully it's going to be next generation emergency communications. There's going to be legacy equipment. One of the things I really encourage you to do is to assume that nobody's going to buy any new software, nobody's going to buy any new equipment.

Just assume that for the moment. We know that won't be true, but the legacy systems have got to work with this system. It's not that hard. They're all Windows based. Just make them write a damn interface. In order to do radio over IP buy a

gateway. Costs $1,500. Put in a gateway.

I got one in my living room, you know, converts the cable into IP. Focus on what's in the middle: shared services, core services and then the policies. Local and state governments. There's a real tendency here to go to the feds and point their figure at if only DHS would do this then we'd be fine or only HHS would do this and we'd be fine.

Emergency response has been a state and local function forever. I don't know when it became a federal one. It isn't a federal one, so state and local ought to be really taking charge here. The mayors ought to take charge, the governors ought to take charge. Why we expect the police, or fire, or EMS to lead on interoperability is beyond me.

Why we blame them for not doing so is beyond me. Kevin's job is to do EMS, it's not to be interoperable with somebody else. Somebody at the core center needs to have that responsibility. That's why we elect Presidents, and Mayors, and Governors and people like that. So it's those folks. Plus, we need then total cost of ownership and focus on outcomes.

We are looking at this in terms of well, 911 got the call answered quickly, or EMS got the guy to the hospital quickly. I don't care. I'm having a

heart attack. It's an end to end thing that we need to have. I've said it before, I'll just stress it again. We've got to get the networks at much higher levels while the locals worry about what to do with the data.

Feds, come back and beat on you a little bit. You've got to mean it when you say all hazards. The number of times when somebody has said yeah, all hazards, all hazard, but we really mean terrorist or we really mean disasters. The first responders are the same, the equipment's the same, the ambulance is the same, the hospital is the same.

The hospitals don't double their size. The federal programs, I mean, I was in politics the first 10 years, I was on the government side the first 10 years. I understand that government programs reflect lobbying, but at some point somebody's got to stand back and say okay, enough already, we need to get those programs together.

DHS is funding IPAWS, which is alerting, HSIN, which is supposedly a network, it's a portal, they were funding until last week something called OPEN, which is a competitor, and now I read that they're going to fund $100 million, $200 million network linking together EOCs. That's all coming out

of this, mostly out of FEMA.

We've got all these different dictionary programs going on. HITSP, NIEM, Global Justice. SAFECOM has been focused on radios. It was focused on voice, then it's doing a little more data, and then they include a cabinet and a few other people, so they're expanding out from there. Then we go over to Department of Commerce and we've got HazCollect. What's that all about?

Dawson is over here spending, what, $300 million on -- no. Nobody's funding the middle. There's very little funding of standards, there's very little funding of core services. Just a final thing there, we need to stop buying proprietary applications. Nobody should be allowed to buy with our money should buy anything that is not fully interoperable and meeting all the standards.

Finally, occurred to me that we're talking emergency medicine. The biggest federal funder of emergency medicine is Medicare and Medicaid, and they're not here and they're not out there where I'm working, so I would hope they would show up. We have projects in core services on patient tracking, on standards we would love to put in front of the appropriate people here.

We'd love for you to look at what we've done. The NRIC VII 1D report that I was coauthor of is a useful document. There's a lot of stuff that's been written on what I call plumbing issues. I hope that you can take a look at that. I appreciate the time. I think I've probably run over my time as I usually do, but I appreciate your indulgence. Thank you.

MR. BUGEL: Thank you, David.

Any questions for Mr. Aylward from the committee? If you do, please state your name first so we can record it.

(No response.)

MR. BUGEL: Well, David, you've left them speechless.

Mr. Roskind?

MR. ROSKIND: My group is going to be Technology Integration. I really liked your presentation, and I agree with almost all of what you were saying. I would invite you to present a white paper synopsis that you'd like us to incorporate into our working group's recommendations.

MR. AYLWARD: Delighted. Thank you.

MR. BUGEL: Yes, Mr. Traficant?

MR. TRAFICANT: I have a question. David,

one of the questions I had, and I guess it's going to be one that will persist for me is as we start looking at where do we find an answer to go attack the middle for some of these core services, who is responsible for making that happen? Where do you go to the decision making authority to get at that?

MR. AYLWARD: This is fundamental. Absolute, the fundamental question. The answer is Pogo had it. We have met it. It's us. This is not a federal issue, and it's not a local issue, it's not a state issue, it's not a private issue, it's not a public issue. It's us. Who sets up, designs and runs the directory of all of the agencies?

We call it EPAD. We had one answer when we started doing it four years ago in thinking about the answer to that question, and in the last year we've come up with a very different answer. We think that the idea initially was let's set up a not for profit that owns each of these core services and have everybody kind of be on the board and because it's a community utility have the directory shared.

We then came to the conclusion that it was probably better to have the same kind of community come up with standards and then let you build one, and you build one and you build one in different parts of

the country and then they could intercommunicate, the model being the Internet.

There's a domain name server. We've got a bunch of domain name services, dot com, dot org, dot biz. The Internet couldn't run without them. There are different ones owned by different companies, but they all made a standard. So we're engaged in exactly that process of setting the standards, developing the standards after having spent a couple of years knocking on Mike's predecessor times four doors saying gee, the feds should do this.

Economists have an expression for this. I'm not an economist, so I've forgotten the expression, but it has to do with that common value. It's not worth enough for you to do it, it's not worth for her to do it, but if we all got together it would be worth a dime and we would all benefit. So it's something I think we've all got to do together, and we invite you to join in.

MR. BUGEL: Mr. McGinnis?

MR. MCGINNIS: David, from the Emergency Medical Working Group I'd like to also extend an invitation. Your thoughts on networking at higher levels, intriguing and definitely something we need to look at. Would you be willing to give some thought to

the current opportunities that are before us in the new 700 single licensee national network, what opportunities there might be for emergency medical to take advantage as a part of that network, and present us some recommendations?

MR. AYLWARD: I'd be delighted to, and I would advance it one step which is the two key agencies in this room, DHS and Department of Commerce, will start deciding on December 3 whether to approve state plans for interoperability.

If they don't, if they don't read those plans carefully and those plans do not include you, then I think one hell of a stink ought to go up, number one, and number two, because that precedent is exactly what will be feeding into the next layer, which is what you're talking about, which is on a concurrent path people are developing the requirements for that system, and, yes, you need to be at that table.

I'd be delighted to do anything I can to help you be there.

MR. BUGEL: Jim?

MR. CORRY: I'm Jim Corry from MSV. I really enjoyed your presentation, also, but I'm just kind of interested in your personal realistic

assessment of all that. I've been retired from the government for nine years, and when I first came to the wireless industry nine years ago one of the first research products I was given when I went to work for CTIA was to work on the topic of digital divide.

I think there is a divide. You pick any community, any technology and there is an equivalent of the digital divide between urban areas and rural areas. There's the haves and the have-nots. I see all this, but almost feel like realistically for the next 30 years all that you're advocating really is only ever going to be brought to bear in wealthy, urban communities.

MR. AYLWARD: Let me make the opposite case.

MR. CORRY: The reason I say that is that I've already bought the retirement property not two and a half hours from here that we intend to retire to when my wife can retire from the government, I can't even get a DSL line. I mean, my only hope for even high speed email is if I go to a satellite company that's providing that.

I do not see in the foreseeable future, if not even in my lifetime, any hope two and a half years from now where I've got my farm of even having a paramedic level first responder come and get me when

my pacemaker blows out or it comes that final time for me. So I was just saying if you could give me a realistic assessment of all this incredible stuff you were talking about?

MR. AYLWARD: In two pieces let's take all those communities that have high speed broadband today and measure the number of the populous that is covered by that, and I bet you it is over 90 percent. Therefore, the question is okay, how do we get those kind of services into 90 percent of America?

I care about the 10 percent because I own property just like that until we moved to be near grandkids, which is the biggest draw in the world, so I've thought about that problem. The 90 percent is pretty straightforward.

When I talk to the Harris Corporations and the others like them and say look, come to this market, here's a really cool market, nobody is doing modern IT in this market, look at all these agencies, they go you've got to be kidding, this is 100,000, I don't have the sales force to go knock on all those doors, I can't do this, I'll go to New York, I'll go to L.A., I'll go to Washington.

That's what you're talking about. That's just a sales model. What hasn't yet happened is

somebody deciding that they're going to get rich by doing it a different way.

I think that rural America could get those services faster than New York City because when I go to Winchester, Virginia, to talk about this kind of stuff the police chief, and the fire chief, and the emergency manager and the head of the hospital, you saw them on that movie, they're all sitting around at the table, they're all friends, they want to work together, they want to do new stuff.

You call that meeting in New York, they won't come. Number one. Number two, you can't go to Winchester and sell it, it's too expensive. So Harris ought to set up a new product which is selling the service, a computer aided dispatch system offered online.

ASP basis, managed service, where all I got to do is have a broadband connection, a thing in my ear and a computer screen, and I can get modern voice over IP, everything that you saw there, and I don't have to do any software at my end. All I got to do is have a broadband pipe. If I'm smart, I'll have a back-up one with a satellite.

MR. BUGEL: David, you almost close to done?

MR. AYLWARD: Yes.

MR. BUGEL: Okay.

MR. AYLWARD: Managed service. In your part of the world, use a satellite. For the 10 percent, use a satellite. That is not the problem it was when you went to work at CTIA. It's a much bigger problem. We didn't have wireless everywhere. I mean, that problem is solving itself pretty fast.

MR. BUGEL: Okay, David, thank you very much.

MR. AYLWARD: Thank you.

MR. BUGEL: You obviously provided us with a lot of input, a lot of things for us to consider. I'm going to exercise chair privilege here and call for a five minute break with hopes that everybody will be back in 10 minutes. So it is now 12:10, let's reconvene here at 12:15, 12:20 if we possibly could. Thank you.

(Whereupon, a short recess was taken.)

MR. BUGEL: I would like to reconvene the meeting. I'm going to ask a procedural question. Lisa, relative to requests by the working group or working group chair to provide evidence to the committee, does that go through the commission and be posted on the comments cycle?

MS. FOWLKES: If people want to send any

comments?

MR. BUGEL: Yes.

MS. FOWLKES: What we've said in the public notice is that they should send them to me and to Eric, and we will get them to you and make sure that they're posted on the web.

MR. BUGEL: Right. So basically, the comments that you request will be sent by the witnesses to the FCC and then they will post them on the website in the comment section for everyone to see as a public process. Okay. We also have with us Jay Sanders from the Global Telemedicine Group.

Mr. Sanders? Thank you.

MR. SANDERS: Thank you, Mr. Chairman, thank the committee for allowing me to share my views on these critical issues. I was actually hoping somebody would ask because I have been working on the issues that you are addressing for over 35 years.

My feeling is that telecommunications is fundamentally the umbilical cord not only for emergency medical services but for day-to-day health care in this country. David has made it very easy for me, and in hearing each of you identify your backgrounds it's even much easier because I have a feeling that I will probably be simply underlining

many of the things that we all share together.

I would actually like to begin with a disclaimer, a request, a hope and a prediction. The disclaimer is I'm a physician, I'm not a technologist. What I know about technology will get us all into trouble. What I do know a lot about are what the needs are, and I also know a lot about what type of functionality the technology needs to provide to address those needs.

I also know what the infrastructure needs to be. You've heard most of the issues with regard to interoperability, with respect to standards, with respect to redundancy, with respect to the operational integrity. It needs to run like a utility. If I turn that light switch on, the light goes on. It can't take days, it can't take months to set up.

That is a very critical issue. What I haven't heard yet is the need to recognize the legal and regulatory constraints that we now deal with. In a mass casualty with a radiation laden cloud or pathogenic microbes these agents are not going to respect state boundaries, and we need to deal with those legal and regulatory issues.

From a request standpoint, and I've actually heard a response to this already, I'd like you to

perhaps broaden your definition of: 1) who you define as an emergency medical personnel; who you define as a first responder. I think we have all too often forgotten about the fact that the corporate community in this country needs to be identified as a first responder.

I think our schools need to be identified as first responders. Quite candidly, while each of us can become victims, each of us can in fact with the appropriate communication infrastructure become first responders in our home or in our work site.

My hope, and I think this was reflected in David's remark, is that the end result of your 90 day working objectives will generate enough political bandwidth to provide the funding to develop the types of systems that we need.

My prediction is that if you do it right 10 years from now medical historians will not be talking about your having developed the emergency medical health care infrastructure, they will talk about your having developed a national health highway system. I take you back to the mid-1990s when President Eisenhower signed the National Highway Act.

As you all know, it was not signed and developed initially to develop our transportation

system and our commerce system in this country. It was designed because he was concerned about the ability to move military personnel from the Atlantic seaboard to the Pacific seaboard.

Based on the state of the roads at the time it took too long, so he created the National Transportation System, the National Highway System, for the wrong reason. It became the greatest economic stimulus to this country. I would anticipate that what you are focusing on today in terms of an emergency medical system will in fact 10 years from now be a national health highway system.

Now, I'm here wearing three hats. First hat is as a physician. I'm a professor of medicine, I'm an internist, I'm boarded in immunology, I've run a major department of medicine at the University of Miami, Jacksonville Memorial Hospital, I helped start with Dr. Eugene Nagel the second EMS system in this country in 1970 in Dade County, Florida, I have run an intensive care unit, I've run an emergency room, I've taken care of patients who have been in major trauma.

Those of you who will recall the L-1011 Eastern Airlines crash in the Everglades a number of decades ago, I was involved in that running the Department of Medicine at Jacksonville Memorial

Hospital and working with our trauma team in the Emergency Department.

I've also been a victim of major trauma having been in Hurricane Andrew and affected by that. I've taken care of patients with anthrax, I've taken care of patients with Dengue, I've taken care of patients with malaria, with drug-resistant tuberculosis and with MRSA, Methicillin-resistant staph aureus.

Long before it became news headlines we have been dealing with that. I've taken care of patients who have been exposed to malathion in the south Dade farmlands, which are the equivalent of sarin gas exposure.

I know the needs of emergency medical services in this country, but I also am very aware of the fact that one of the things I hope we do not lose sight of when we're talking about major traffic accidents, whether we're talking about a dirty bomb, whether we're talking about flu pandemic, is the fact that we have invisible emergencies in this country every single day that unfortunately we don't pay enough attention to.

What do I mean by that? What I mean by that is the fact that there are people dying every single

day in the United States because of lack of access to health care. I am talking about the fact that people are dying of sudden cardiac arrest, or myocardial infarctions, or their stroke because they haven't had access to effective care.

The fascinating thing is that doesn't get headlines, and yet, if you take a year's period of time and add up all the deaths related to those causes they are much greater than any concern I have about a flu pandemic in this country. The problem is they're occurring over a longer timeframe, there are three to four in multiple locations and that doesn't get the same kind of headlines as a Katrina does.

They are equally if not more important because they are happening every single day. I'm here also with a second hat as a medical researcher. Since the early 1970s, actually in 1973, I received one of the first eight grants given by what was then HEW and the National Science Foundation for a system called telemedicine.

The first telemedicine funded grants from the U.S. government occurred in 1973, and I had one of those grants. I have been addressing maldistribution of health care, whether on an emergency basis or a chronic basis, ever since then.

I helped establish the first statewide telemedicine system in 1991 in the State of Georgia which were 59 sites that connected three academic medical centers to nine secondary care community hospitals, each of which were connected with four or five primary health care facilities including public health facilities.

I developed in 1993 the first what we called electronic house call. This was the first telemedicine technology to go into everyone's home.

One of the fascinating things that we learned from those experiments, which are now going on all over the world, is the fact that it's not simply a convenience to put health care technology into an individual's home, it is virtually from the medical standpoint the only thing to do because we have learned that the exam room has to be where the patient is not where the physician, provider or nurse is.

I also helped start, and, John, correct me if I'm wrong on the dates here, what was it, 1993 that we started the American Telemedicine Association? 1993, and I was President of that organization in 1996 and I'm now President Emeritus of that organization. Also, in 1996 for Secretary Shalala I represented the United States in telemedicine to the G-8 nations.

My third hat is one as being a member of the Board of Directors and Head of the Rural Health Care Committee of the Universal Service Fund. Any comments I make today should be viewed simply as educational. I am not proposing anything at all. It is inappropriate for me to do that.

One thing I do want to do and have on the record is the fact that I applaud Chairman Martin for the pilot program that he has initiated utilizing the Universal Service Funds and the Rural Health Care component to develop regional networks of communication infrastructure.

My remarks will focus on an event which began in October of 2001 when I was meeting with Chairman Powell at the time and discussing the recent 9/11 event and the anthrax scare that occurred. I asked Chairman Powell at the meeting as to what the FCC was going to do with respect to the bioterrorist event?

He asked me to clarify my question, and I gave him the following example. I said if I were a bioterrorist and I spent any time at all thinking about how to be a good bioterrorist and I wanted to spread anthrax throughout the United States the last thing in the world I would do would be go to an urban

site.

The simplest thing for me to do would be go to a feed lot some place in Kansas, like Garden City, Kansas. Any of you who have ever been to Garden City, Kansas, will know that it is a town that has a large abattoir there and there are feed lots outside that town which house between 150,000 and 250,000 head of cattle two weeks prior to being slaughtered.

The only thing those cows eat are corn to fatten them up from feed lots. There is no grass that they have to graze on. If I were a smart bioterrorist what I would do is simply drop my anthrax spores in those feed lots. Now, I have seen patients with anthrax. Respiratory anthrax can be treated if identified within a 24, even 48 hour period of time.

GI anthrax is very difficult to treat, particularly because it's very difficult to diagnose before there's huge toxemia occurring. Now, why am I talking about GI anthrax? Because once I drop it into the feed lot of those cows and those cows are slaughtered, 250,000 head, and those parts sent throughout the United States, I have set up a multistate anthrax epidemic, plain and simple.

Now, what is the most critical aspect about identifying the victim with smallpox, the victim with

anthrax? What is most critical is immediate diagnosis, immediate treatment, and in the case of smallpox, of course, immediate isolation. We all recall the multiple information sound bytes that we got when the anthrax outbreak occurred.

We heard from Florida, we heard from the CDC, we heard from NIH, we heard from General John Parker at Ft. Detrick. Quite candidly, if you listened to all of the information coming out, there was a lot of misinformation coming out. It was clearly reflective of the fact that we have very few true experts to deal with some of these exotic types of pathogenic microbes.

How do we get immediate diagnosis? The simplest way to do that is to immediately get the expert to that victim. How do we do that? We do that electronically. You can't take the time to bring the victim to the expert, especially if that only expert is at NIH or at Ft. Detrick, and you can't bring the expert out to that individual.

The proposal that I suggested at the time to Chairman Powell is to use some of the funds, and I had my USAC hat off at the time that I made the suggestion, that we use some of the Universal Service Funds to horizontally connect all of the vertical

stovepipe telemedicine programs throughout the United States.

We've got a rich infrastructure on a state by state basis of telemedicine networks. We need to seamlessly connect them so that they are totally interoperable so I can bring the expert to wherever that patient is. The only thing we really needed to do that was to take some of the Universal Service Funds and apply it to connect horizontally all of these vertical stovepipes in the various 50 states.

At the time according to the evaluation of the Telecommunications Act of 1996 that established the Universal Service Fund there was not a mechanism to do that. However, Chairman Powell asked for a White Paper, and since that White Paper could not come from me from the Universal Service Fund I went to John Linkous and that ATA.

We convened a workshop made up of members of the ATA, made up of members from Ft. Detrick and from CDC and drafted a White Paper that was submitted to Chairman Powell at the end of November of 2001. He at that point asked his Chief of Staff, Marsha McBride, to establish basically a homeland security type of infrastructure within FCC that was chaired by Marsha McBride.

I made the suggestion that we now try this possibility on a regional basis and perhaps go to the Southern Governors Association and see if the Southern Governors Association would permit the establishment of a multistate telemedicine network to address bioterrorism.

I met with the Southern Governors Association in February of 2002 at which point they provided a unanimous vote in favor of doing this.

We then subsequently briefed the new CIO of the Department of Homeland Security at the time, Steve Cooper, who also wrapped his arm about this, and we also briefed the then Director of the Department of Homeland Preparedness or the Division of Homeland Preparedness within HHS, and, once again, the proposal was embraced.

The only thing that was not available was the necessary funding and somebody trying to find out who had the funds to try and establish this on a regional basis? We went so far within the Southern Governors Association to actually have a test of a smallpox epidemic involving four states, Missouri, Kentucky, Virginia and Florida, which showed the capability but also showed all the flaws in this.

This was I believe in, Lisa, 1993 that we

had the --

MS. KAPLOWITZ: 2003.

MR. SANDERS: Excuse me?

MS. KAPLOWITZ: 2003.

MR. SANDERS: 2003, right. Yes, 2003. It also showed as I mentioned all of the potholes that exist, but to me those were positive. Those identified the things that we needed to work on. Unfortunately, that proposal and that system demonstration has just laid in the freezer since then because of a lack of availability of funds.

I might also mention that the proposal that was embraced by the Southern Governors Association, and the head of that association at the time was Governor Mark Warner, was then subsequently endorsed by the National Governors Association.

So here we sit with one component of a system that would be very helpful, whether we're talking about day-to-day health care or whether we're talking about mass casualty event, a very simple way to deal with it and not the funding to do it. That's why I indicated at the beginning I applaud Chairman Martin's FCC pilot program initiative, which if expanded and continued would have the wherewithal to do that.

I'd like to conclude my remarks and remind everyone of a quote by Winston Churchill after the second world war was over and he was asked by a group of reporters why he liked the United States so much, and he said well, the reason I do is they always, always come up with the right solution to a problem after they've tried everything else. Thank you very much.

MR. BUGEL: Thank you, Dr. Sanders. Any questions for Dr. Sanders from the committee?

Mr. Griffin?

MR. GRIFFIN: Eric Griffin. In your past experience with this you've been doing this, have a lot of experience with it, what do you see as being the top one or two issues getting the different parties to come together on being able to implement an effective telemedicine product program? I mean, is it just equipment, or is it the policy, or about standards?

MR. SANDERS: Well, I think David mentioned in his comments that somebody was missing from this table, and we've had great difficulty in getting telemedicine funded, reimbursed, for the care that is being given. For some reason CMS tends to define care based upon its location and what provides the care as

opposed to the fact that care is simply being given.

If I can examine a patient in their home, listen to their heart and lung sounds, look in their eyes, ears, nose and throat, get all the digital readouts from my medical peripheral diagnostic device and prevent the readmission of that patient with congestive heart failure and pulmonary edema because I've picked up the fact that they just gained three pounds overnight and I hear some rales in their lung, for some reason that care because it's being provided in the home, not that it's just the right care but it's being provided in the home, is not reimbursed.

After many years of struggle we have gotten CMS to reimburse for care to rural communities, but that is not uniform either. So one of the issues relates to the reimbursement aspect of it. A second component is that there are no funds for really regional connectivity. There just are not.

If I want to set up a telemedicine program between an academic medical center, let's say Hopkins where I have my present employment, and rural Maryland, I can get Universal Service Funds to cover the bandwidth infrastructure, but I can't get any funds to pay for the equipment at the rural site.

This is not, this hasn't been mentioned and

I'm a little hesitant to mention it because it may not be the direct focus, but what a lot of people forget is bringing health care to rural communities isn't just about bringing health care to rural communities because it turns out that in rural communities the rural hospital is the major employer in town most of the time.

When that rural hospital's bed census goes down because they don't have access to the subspecialists, the cardiologists, as an example, or the neurosurgeon, what they have to do fundamentally is discharge that patient and send them to the academic medical center or a secondary care community hospital. Their bed census goes down and that rural hospital goes under.

When that rural hospital goes under not only have you destroyed the health care delivery system in that community, you've destroyed the socioeconomic fabric of that community. So this is not just medical care, it is the socioeconomices. The other thing that David alluded to if not said directly, we also need to stop thinking about this as bandwidth and frequency for health care.

There's a huge amount of bandwidth out there. He mentioned the dark fiber, but I would also

underline the fact that the entertainment community, the banking industry, the commerce industry, has huge amounts of bandwidth out there, but we never think about that and we ought to because there's a lot of bandwidth that we could piggybacking on.

So there are a lot of resources. I don't think it is the resources, I just think it's the kind of inventory that we do and I think getting a small amount of dollars to connect the types of systems that we need.

Once again, I'll end with saying that while everybody gets caught up with the thoughts of, you know, a cloud seeded with radiation, or a smallpox epidemic, or pandemic flu, the fundamental reality is we're losing many more patients from day-to-day bread and butter health care needs that they don't have access to.

MR. BUGEL: Dr. Kaplowitz?

MS. KAPLOWITZ: I just want to kind of expand your use of telemedicine because in emergency situations we need those hospitals to provide surge capacity, and so we need to be able to use virtual ICUs, we need to be able to expand trauma care to these facilities because as we found in April in Blacksburg, you can't afford to transport those folks

40 miles when the helicopters can't fly, they have to go to their closest facility.

Having those kinds of connections not just, you know, what we consider classic telemedicine but being able to transmit all that information and enabling those facilities to provide trauma care is absolutely key. It's just another part of what I consider, you know, overall telemedicine.

MR. SANDERS: Absolutely, Lisa. I failed to mention that at the University of Miami I was not only a Professor of Medicine, I'm Professor of Public Health and Epidemiology. Flip the coin a second.

We're often thinking about providing expertise to the rural hospital utilizing telemedicine, that was our initial focus, but think about the fact that if, for instance, let's say I'm at the Mass General right now and into the ER walks a patient who after we have realized that's not chicken pox, that's smallpox, what has just happened?

I've closed that hospital. That hospital has got to be quarantined. I've now lost that resource. Now, who takes care of the daily patients that walk in to the emergency department? I actually see the system working a two way street.

I now can use resources from rural hospital

primary care docs to take care of the daily walk in patients that normally would be coming in to a mass general hospital and now cannot because they've got quarantine. So I think this resource is a two way type of street in terms of the redundancy that we need.

MR. BUGEL: Mr. Linkous?

MR. LINKOUS: Thanks. I might just add one thing to one of the things that you were saying, Jay, about what's happened to some of the legislation. Two years ago Senator Burr introduced the Pandemic Health Act which did get proposed, and in that act it did include, you may know, I don't know, some of the language from our original proposal that the Southern Governors had talked about an inventory and linking some of the networks.

I believe it's over in HHS now for implementation. Unfortunately, there's no money for that of course for implementation, so once again, we've got some approval, some agreement, but resources tends to be where the problem is.

MR. BUGEL: All right. Well, Doctor, thank you very much. We really do appreciate you coming in to speak to us. Don't be surprised if we reach back to you.

MR. SANDERS: Thank you.

MR. BUGEL: I'd now like to bring up Mary Ellen Hennessy and Ivan Gotham from the New York State Health Department.

MS. HENNESSY: Good afternoon, everyone. Ivan and I are very pleased to have been invited to speak with you today. We feel that we in New York have had the opportunity to experience some emergencies that all of you are aware of but that we have learned an awful lot from. I am a nurse by background. I've been in health care administration for quite a while in the government.

We received our preparedness money just like the other states in the nation did. What we thought was we needed to talk to the people most who were in the throws of the terrorist attacks and those hospitals and public health units that had to respond to try and find out what we did right, what we did wrong and where we could move from here.

As you all know or may not know we created our Health Emergency Response Data System and we affectionately call that HERDS. We will try and talk to you today in a New York minute so that we don't tie up any more of your time. Our HERDS system operates within a larger calmer system. It's a secure,

standards-based integrated infrastructure for enterprise-wide health information.

We have been operational since 1995, as you can see, long before the events of 2001. As we said, it's web-based and accessible via the Internet, so you can be anywhere in the world and still access this as long as you have that Internet connection. We do have standards that require ID and password, and we are an integrated architect with supporting a wide array of health information exchange.

That is routine information, it's preparedness and response, it's disease surveillance and lab reporting, it's health alerting and it's volunteer databases, as well as any HERDS preparedness surveys that we've done so that we can do more intense planning in New York State.

It's used by all the local health departments, we have 57 in New York and five boroughs in New York City, so that's our 62 counties, and we have 240 plus hospitals, we have over 600 nursing homes, we have many, many practitioners who are all our partners.

When we have national events or whenever there is an interest our federal partners also go to our dashboards and they can see all of our numbers and

data that we collect through this system. The RNC is a good example of that.

We were set up in New York City monitoring the events of the Republican National Convention, and our agencies, and DHHS and the city agencies, et cetera, wanted to be a part of that, and that included our federal partners, law enforcement, and city police and fire.

This leverages existing infrastructure,and it's secure and the availability is there. We identify management and access controls, and we have a core integration application, which means that it does integrate all of the systems for us. The one thing to remember about this system is that it was a ground up movement.

This was developed after 9/11 when the facilities who tried to respond to the disaster really were inundated with many, many phone calls, inquiries and families looking for their loved ones.

We thought if they ever had the enormous amount of patients that we wanted them to receive and never did that they would never have been able to get their jobs done. They came to us, a governmental agency, and said we can never let that happen again. We have to be ready to take care of the patients, so

there needs to be a governmental agency with one repository of the data that everyone was asking for.

Where are my EMS fellows? Where are my fire? How many dead? How many identified? How many have come in through the emergency department? How many walking wounded? All of those questions were being repeatedly put upon each and every hospital five, or six, or seven, or eight times an hour to find out where we were then, and they just couldn't handle it.

So we did create this HERDS data repository. It's coordinated. The Emergency Preparedness Committee asked us to come forward by the Greater New York Hospital Association, and we worked with them as partners. We had regional planning and response with New York, New Jersey and Connecticut, again, understanding that there are no lines in the sand when you're talking about epidemiology, and organisms and blast factors, et cetera.

In fact, we have data from the Greater Hospital Association that talks about over 100 facilities were used by persons who were trying to flee New York City during the 9/11 event. It establishes dialogue. We had a framework for communicating and we tried that with our New York

Presbyterian system.

The model worked, and we adopted it for further growth within the health department. The composition of the group really was all of our health care partners.

It was our local health departments, our hospitals, nursing homes, physician organizations, local, state and federal agencies, our policing agencies, our military agencies, we had people represented from NDMS, which was, again, another part of the system at that point, but we knew that NDMS also had a vested interest in our hospitals and when they needed beds there was a system in place.

We wanted to know how you work your system and how we can help incorporate those two systems in New York State, so we developed this system to meet an information exchange need and we extended it to public health events.

So in general what we collect is facility resources, we collect surge, we collect event related data, number of patients coming in, number of blast victims, number of vaccine units that you might have, we put out our chem packs to all our facilities, we might want to know how many Mark I kits that you have available if you have a field disaster and they can

respond to that.

We also have the goal of being able to have agreed upon data entry definitions, and we talked about that a little bit more today in our previous speakers. We have protection of the confidential information, and we know that in certain emergencies even HIPAA is waived a bit so that we can share this information with our emergency partners and responders.

We have had many different ways to use HERDS in the past five years. We've had outbreaks of e. coli. For preparedness, we can actually pull all of our counties, our facilities, our nursing homes, and we can ask them, what assets do you have? Now, I know how many air beds that I have in my state if I have a TB outbreak or a smallpox outbreak and I need to isolate them.

Now, I know how many trauma beds I have and what an ED in my state can surge to. I know the exact number of bays that we have, and I know how many portable ventilators that I might have on any given day, how many are fixed, are many we could surge to if we needed to.

When we start to monitor events like the Republican National Convention we can ask any question

that we want of this data system when we put it out there for the hospitals to respond to and/or the nursing homes or county health departments. What they tell us is anything that we need to know, which is blood factors in New York City. There was a shortage on or about the time of the RNC.

We wanted to make sure that we had enough blood in the facilities to make sure if we did have a sort of blaster trauma that we would have enough in the city to respond to that. Additionally, if the RNC was just affecting New York City we can really activate HERDS to the rest of the hospitals in our state and surrounding areas and ask them what resources they might have available should we need to ship them into the lower part of our state.

We have data exchanges with our health care facilities, so the importantness of this is that it's bidirectional. We have the ability to talk to the hospitals back and forth during this data exchange.

They have the ability to say to us through this system we're notifying our EOC that we need more ventilators, we're also notifying so that when you sit at the EOC and you follow incident management systems that we all need to follow in emergencies that we make sure that this is not a redundant request, but rather,

that the request is make sure that it's up at the right peoples attention.

This is just the New York State Health Commerce architecture. As you can see, we have health providers, response agencies, firefighters, local health departments, health facilities, clinical labs all feed into our commerce system, and when we bring them in we bring them in through the secure web access.

HERDS is a part of this system, and when we want to build HERDS up with some basic data to tell me what are the amount of emergency departments I have within this 100 mile radius so that I can activate only hospitals with emergency departments to respond, then I have that data in my spatial data warehouse because we've collected it through not only our critical assets, but we might have that through our public health.

We have our population spaced, we have our disease surveillance reporting, a communication directory that supports it and we also have collaborative forums where we can do this bidirectional talking back and forth, and that is significant.

We've deployed it to the hospitals, nursing

homes, local health adult and home care clinics and other facilities, and I'll give you an example of this. When CDC was telling us that we did not have enough vaccine a few years ago we needed to be very wise about how we distributed the vaccine. We were asked by CDC to take a poll of how much we had in the state.

Well, we're not connected with every physician yet, we hope to be at some point, but we are connected to all the health care facilities. What we did was ask them how much available vaccine they had by the dosage and by the type of vaccine.

So we were able to at the state level find out how much we had and be able to either distribute it, send out our guidelines to those people saying this is what you need to do or see where we were weak in some areas and needed to bolster it in other areas. We can do the same thing for any other type of drug should we have the emergent event in a part of the state or nation.

We've done drills, in New York City we've done dirty bomb drills, we've done a lot of bioterror agents, we've done SARS, we've done a lot of work where we might have to search the hospitals both medically and through trauma, two different kinds of

surges.

The emergency department unfortunately is always the hub of where everyone needs to go, and so we're focusing now on helping our emergency departments decompress in a time period that would be meaningful so that when people do start to come in we at least have the emergency department ready and able to go.

We're currently doing some ongoing surveillance. We've done bed availability for four years now, a snapshot in time of our hospitals across New York State, to tell us at this point in time, at 10:00 on a Wednesday morning, how many beds do you have available, and how many people are waiting in your emergency department?

Recently, because of all of the ED overcrowding issues that we're seeing in the nation we have expanded that to three times a week. We're asking hospitals to report data to us at 8:00 on a Monday night, 8:00 on a Friday night and 10:00 on a Wednesday morning, the snapshot at those times, to tell us some things that we need to know.

When is the ED most overcrowded? Is it because of a surgery schedule in the middle of the week or is it because you have a lot of walk ins? Is

it because we don't do as many surgeries on the weekend of course as we do during the week, et cetera? So we will be able to gather great information from having this interconnectivity with the hospitals.

So how do we use it for emergency response? Anyone here remember the northeast blackout of 2003? I was on the 19th floor of a hotel in New York City, and that's a lot of stairs when you have to go back up and down quite a few times.

What it showed us facility-wise when we were able to get to our command post in the city, and get onto HERDS, and activate it and say, do you have power, do you have generators on, how are you doing for fuel, do you have water, is your facility safe, we found, and Ivan will talk to you about some outcomes of this, that not everyone had the forethought to put their computer rooms on emergency back-up.

Maybe it was a lab before and they changed it over to an office, so now the same type of back-up is different. So that was one of the things. The blood shortage in 2004, vaccine shortage, regional flooding, where we have a part of our state that happens to have had a total hospital evacuation, and HERDS was activated during that time and we worked with our emergency services partners, our police and

our health care workers during that time.

Additionally, we have baseline surveys that give us those day to day numbers that we need to know to do a comparison rate. HRSA also asked for baseline information over the courses of the past four years. This is just an example of a real time report we can run on the airborne isolation infection room capacity. As I said, we now know how much we have.

We can ask every hospital at any moment in time how many do you have free or how many could you have free, knowing that they may use these rooms for other types of patients when they don't need it for negative air pressure. This is another example of our hospital admissions charted on a HERDS GIS map. This is lab confirmed positive influenza. We collect this data yearly during flu season to find out how many deaths.

Again, a few years ago when CDC was concerned about a grouping of perhaps younger deaths we started collecting by age range. We can map that on GIS to show in a moment where we have our most cases. Our surge for air beds in ED again is a matter of just asking the hospitals to give us current numbers for how many patients are you seeing with this type of symptom so that we can see if that is all

clustering in one particular area.

If we hear from our local health departments that they're concerned, they've seen something new, strange, five in a day, five in a two days, never seen it before, they can trigger us to activate HERDS, and we can activate it within a 200 mile radius and bring it in if we find out that the cases are only within a 50 mile radius.

Then we can kind of center in as to where the exposure might have been if we can start looking at the epidemiology of the event. Again, I'm going to go through some of these charts, and we can give you this PowerPoint later, but basically we can look at the e. coli outbreak for local health department reporting when they were sending in information by HERDS.

The nursing home vaccine survey. We had our hands on the reports and where the most vaccine was at any point in time, and we could go specifically to each nursing home and deal directly with them. This is a daily shot, actually, we did this this morning, of our ED bed availability, and how many patients were waiting and by what type.

So we're looking for psych beds, we're looking for ICU beds, we're looking for monitored

beds, and then we're looking to find out how many patients who need those beds are backed up in your emergency department. So we feel that we have a good finger on the pulse of our health care at any one point in time, and during live demonstrations we certainly can reach out to our health care partners and ask them things.

The one thing I will mention is that we have been invited to the table at the national level to work on the HAvBED project. HAvBED 1 and 2 just completed itself for Department of Health and Human Services, and we're happy to say that HERDS played a large part in the type of data that they now collect for bed availability across the nation, and we hope that is put into use.

The other committee is the Patient Locator Committee which we desperately need at a national level. Thank you. Ivan?

MR. GOTHAM: Thank you. My name is Ivan Gotham, I'm responsible for the information infrastructure for the state health department. I'm also an Associate Professor at the School of Public Health, Albany, New York, and also involved in a number of national committees for public health informatics.

Some of the things I want to concentrate on now are not just the application but the dependency of that application on communications infrastructure. One of the lessons we learned from the northeast blackout was that although we were well-prepared in terms of our availability and continuity of operations infrastructure, the remote end points were not.

Over half the facilities were not able to connect to HERDS after it was activated, not immediately anyway, not until towards the end of that weekend which underscores the importance of the hospitals or the health care providers' need for alternate reliable diverse communications pathways in an emergency.

During the regional flooding incident and the western regional snowstorm, particularly the western region snowstorm emergency, there were massive power outages, but we were able to connect to our hospitals, so I feel that we were sort of lucky in that particular instance.

There were lessons learned from both 9/11 and the northeast blackout so that the hospitals have improved their infrastructure. I'm going to go over some of the, we do use the HERDS system to assess the communications capacity of our hospitals and perhaps

we would work with you to gain additional insight into what hospitals' actual needs are, but here are just some based statistics on what the hospitals can do.

If you look at the radio communications, for example, only half of them report they can establish emergency radio communications with their local EOC. Their radio communications capacities are anything but standardized. We note that 60 percent of them have an established relationship with RACES, but that leaves 40 percent who do not.

Satellite communications. Hospitals have invested in that, but the bottom line for that capability is vastly oversold, the capacity is, as the main communications capabilities are. So the bottom line is hospitals are somewhat prepared but not completely prepared at all for communications during an event.

So I wanted to sort of summarize our perspective based on our lessons learned on what the problem is. At the state, federal, national and regional level there are sophisticated health preparedness and response systems evolving, and at least in our state they're evolving on a standards based messaging exchange capacity.

They're designed to establish and exchange

critical data between response partners. The response systems are used in emergencies, and their effectiveness is dependent upon efficient and timely accessibility by all response partners, state, local, regional and emergency response level.

The access to data or information exchange resources needed for clinical care for both victims affected by the event and health consumers within the affected region are also dependent upon continuity and availability of communications infrastructure during an event.

So, therefore, all critical health functions are dependent on the very communications infrastructure, voice, data and video, that would be subject to outage or disruption due to the emergency event itself. One could sort of roughly categorize the outage, and I think we've seen all of these in New York State, which could be due to logically the physical disruption due to damage related to the event.

However, there's a surge issue utilization as a result of the event, and also, which happened in 9/11, reallocation of communications resources through other sectors between national, regional, ICS or command decisions. So what is needed? From our

perspective, one, the Office of National Coordinator established a rather effective and well-promoted NHIN initiative.

I think that there needs to be a national health information communications infrastructure with a national plan, standardization and a funding process. I think it needs to support both urban and rural areas. It needs to be diverse, redundant, multimodal interoperable with interoperable communications modalities including broadband, wireless, high frequency radio and satellite.

It needs to connect state, regional, local public health, health care facilities, OEM, tribal nations, clinicians, and consumers as needed and deeded appropriate. It needs to be accessed on demand. It cannot wait for an instant command decision to make a decision. It must be available on demand in an event.

It needs to have dual use for both routine clinical and public health practice as well as emergency use during an event. It needs to support core interoperable low level application support for reliable, continuous, secure voice data and video communications including telemedicine.

It needs to support the high level

application support for those communications services which clinicians, public health practitioners and EMS use on a routine basis as email, web services, manual web browsing and telemedicine. It needs to support interoperability with both EMS and public safety.

I include some references and background in our presentation on what New York State has done with its information infrastructure. Thank you.

MR. BUGEL: Thank you very much. I have one question. Is this cross-boundary New Jersey, Connecticut? How are they linked into this?

MS. HENNESS: In several ways. I mean, we have some cross-linkages with our epidemiology teams, and we have cross-linkages with our preparedness teams, but we also invited any hospitals in the surrounding areas to join this voluntary and many of them have because they want to have the same types of resources available to them as we would like for us.

MR. BUGEL: So there is the implied mutual aid?

MS. HENNESSY: Correct.

MR. BUGEL: Okay. Mr. Roskind?

MR. ROSKIND: Great presentation. Thank you very much. Question for you about the slide statistics on RACES and the percentage of

availability. What was the scope of that slide that presented statistics?

MR. GOTHAM: I'm sorry. That was a survey of all 230 hospitals in the state.

MR. ROSKIND: For the State of New York?

MR. GOTHAM: Correct.

MR. ROSKIND: Okay.

MR. GOTHAM: I think that includes the VA hospitals as well.

MR. ROSKIND: Included federal hospitals?

MR. GOTHAM: Yes. VA hospitals in New York State that are open anyway our on our HERDS system.

MR. ROSKIND: Right, VA open hospitals. Got it. Thank you.

MS. KAPLOWITZ: Lisa Kaplowitz. One of the challenges we've had in Virginia with systems like this is getting the data entered. What kind of a challenge has this been? I mean, how much is linked to, you know, automatic systems already in place? You're asking for a lot of information that often has to be input by people who are often doing other things.

MS. HENNESSY: There's a few things I can say about that. It doesn't hurt to be the health department and oversee the regulatory process for all

of our hospitals.

MR. BUGEL: Coalition of the willing?

MS. HENNESSY: Yes. But it also came from them, and we keep saying to them this is what will ultimately help. You know, I'm from the government, I'm here to help. We do want to make it as easy as possible, and so when we get a survey out we want to get it done quickly so that they don't have to keep going, and going and going.

As Ivan often says he wants to do it automagically, which is that if they already have a system for collecting the data on who comes into the emergency department, by all means we'll work with them to make it automated so that they can do that or for census if we're collecting NDMS types of numbers.

In fact, we have had several hospitals on our systems already who are doing this as part of a regional health informatic structure.

Ivan?

MR. GOTHAM: We are working with RIOs to actually implement to have the HAvBED reporting standard. Now HAVE is evolving and many hospitals cannot speak HAVE, but we are implementing the capacity to receive and send those message types as well as CAP, which is part of the EDXL standard. So

we are moving full on to incorporate the EDXL suite of payload message standards into our system.

We're also fully HL-7 compliant bidirectional as well.

MR. BUGEL: Mr. Corry?

MR. CORRY: I'm struggling just a little bit with the difference between the discussions we're having of applications versus what I would generally call connectivity. I think if you're coming from a health care background you're focused on policy, applications, and so I've just got a couple of questions because I want to understand the technology.

Is HERDS an application, a web-based something or other that if I'm a hospital I have an account and a password and that's how I'm participating in HERDS?

MR. GOTHAM: Correct, correct. Yes.

MR. CORRY: Okay. Secondly, are there any dedicated circuits that are exclusively owned for and operated for connectivity to HERDS?

That is, whoever owns HERDS, are you putting in a private circuit from the health department to that hospital and that circuit can only be used to access HERDS or are we generally talking about anybody who wants to participate in HERDS has to figure out

how to come up with their own connectivity to the internet?

MR. GOTHAM: It's all Internet based, IP based. We rely on the hospitals to build redundancy in terms of multi-homed Internet access and other mechanisms to get to the state health department.

However, going back to the telemedicine piece, during 9/11 we were very successful as you know that the CO was taken out as the result of the collapse of Building 7 I think it was, and what occurred was that south of Poughkeepsie all frame relay communications, which was at that time the backbone of data communications for many offices in the state, was gone.

What we did discover is that we could use plain old ISDN and our videoconference network, which was not damaged, it was just fortuitous, just it's the example of the need for diversity of communications, pathways and architecture, we were able to leverage that capacity.

So what we've done with our county health departments is we've established a videoconferencing network through dedicated lines and set that up to be different, as many diverse CO pathways as we can establish, and we drill them on using that as a

dedicated access mechanism for the state health department. We have not done that with hospitals, but we have done that with local health departments.

So basically, build a path to the Internet, and you can get to us or build a path to one of our videoconferencing infrastructures and you can get to us with data as well. Again, our hope from this committee is that there is a national plan to provide diverse alternate pathways for access for Internet communications with state-based emergency response applications.

That's what our hope is that the mission of this committee is, to build that communications infrastructure to support our applications.

MR. CORRY: And then when you say, somebody used the term activation of HERDS, are we simply sending out pager messages and emails to distributed lists and groups saying hey, this is the health department, we're up and live on HERDS now and there's somebody, if you send an email, I mean, we're right there or is there something -- I'm trying to understand the activation, the actual mechanics.

Is that some special network or, again, just broadcast with whatever technology is available?

MR. GOTHAM: Correct.

MR. CORRY: Come to HERDS via however you connect to the Internet?

MR. GOTHAM: Correct.

MR. CORRY: Okay.

MR. GOTHAM: Correct. HERDS is a dynamic multitasking system where you can have many, many different events going on simultaneously. You can have an event in Buffalo, you can have one in Syracuse, you can have one in New York City all happen simultaneously. Different events, different resource requirements.

The system uses a central communications directory to alert the hospitals, and that includes key rolls of the hospital, CEO, laboratory and head of ED, it may alert certain coordinator rolls within the hospital, it alerts local health departments where the hospitals have been activated.

Activated really means associated with an event within the system, and so they'll receive a voice phone call down to their pager, or to their cell phone, or whatever communications device they specified in the communications directory depending upon the hour at which the alert occurs.

So it's basically a call down accompanied by email and/or fax depending upon the event. So it's

not an infrastructure, it's an application level notification or activation.

MR. CORRY: Mr. Chairman, if I could ask one more thing, a technical question?

MR. BUGEL: So be it.

MR. CORRY: Thank you. I realize that GETS and Wireless Priority Service in today's generation of those services have no impact on data connectivity in providing any sort of -- well, I suppose if you're dialing in over a phone line GETS would provide you with some connectivity, but I'm just kind of curious how widely utilized within your state by this community we're discussing are GETS, WPS and TSP programs currently used?

MR. GOTHAM: Well, our deliverables for our federal grants require that we establish TSP service as well as GETS and WPS, acquire GETS and WPS cards. That's what we're in the process of doing. Again, obviously TSP, the health takes lower priority to other restoration service to other sectors.

However, again, I think it gets back to rather than restore from zero to have measures to -- if everybody gets GETS cards or WPS then it really makes no sense in terms of priority access to communications, so my point here I think is that there

needs to be diversity. There needs to be diversity and redundant capacity within each communications type, and there needs to be a plan for accessing those during an event.

If my land line is down waiting two weeks for it to be restored it's not going to help us from our need in terms of management of hospital, or health care, or county resource needs because we need to have it now.

MR. BUGEL: I have one question going back to the issue of transport. Are you participating in what I believe is a New York State project, a broadband network that's being built for New York? Are you participating in that?

MR. GOTHAM: The statewide wireless network.

MR. BUGEL: Yes.

MR. GOTHAM: Yes. Well, we're participating from an input type of -- but, again, that's a ways off in terms of the location. Yes, we've participated as providing information as far as users or requirements.

MR. BUGEL: Other questions from the committee? Mr. Linkous?

MR. LINKOUS: That really affects the interpretation. Thank you very much for that. Just a couple of things. One, as I understand it this is

financed primarily out of a federal grant. Is that correct?

MR. GOTHAM: Federal grants, yes.

MR. LINKOUS: Have there been any incentives or needed incentives for the local institutions to get them involved in it? I understand because you're the health department it helps, but is there any need for that as you move forward?

MS. HENNESSY: We fund them with the grant monies as well, so the Department of Health was the recipient of the hospital preparedness grant if you will and we expanded that to nursing homes, et cetera. We do give the hospitals funding to automagically try and create these interconnectivity, but we also give them grant funding and deliverables to meet the HAvBED deliverables, and to meet our needs for responding to HERDS drills and to participate in a drill where we might use it as a tabletop exercise.

MR. LINKOUS: I think it would be helpful if the committee got some idea of the cost, if you have cost data that you could share with the committee at some point. My final question is the interconnectivity between what you're doing and the emergency fire rescue, the other systems within the state itself.

MS. HENNESSEY: You know, in two days I'm going down to meet with FDNY in New York to talk about their concerns about ED overcrowding in the New York City hospitals. One of the things that they don't have the ability to get unless they pick up the phone and call each day is to get the bed information and how backed-up the EDs are.

They can do it by their dispatch, but they don't have a regular data system to collect that information. We have it, we'd be glad to share it with them and we use it with them to make sure that we're not bringing patients to an already overcrowded emergency department.

CMS recently came out with a new EMTALA type of rule that says that if you really keep your emergency vehicles at the facility longer than 30 minutes I believe it is, you know, if you can't exchange that patient from the EMS to the hospital within 30 minutes then that's an EMTALA violation. So it's within all of our purviews to really try and make that expedited.

So we do work with FDNY, and you know they are the 911 EMS system there. However, one of the things that we need to do is although we collect the data and we share it we need to make sure that there's

constant bidirectional communications. As Ivan said, if we only have one system to do that then we're going to be lacking if we don't build some redundancy in there. Thank you, again, for inviting us.

MR. BUGEL: Thank you very much. We really appreciate it. We may call on you again. Well, I want to thank you all very much for coming to Washington for many of you and for those of you here for attending the meeting today. This is our first meeting. We hope to have our second meeting.

There is a tentative schedule that is in your package. We don't have a publicly announced date, but we have a tentative date for our next meeting. The other thing that I would like to mention to you is that obviously as we've said several times we have to move rather rapidly.

I would encourage you to reach out to your working group chairs, introduce yourself, try to develop some schedules upon which to meet for conference calls or other sessions. We are in the information gathering phase at this point in time. I would also ask that the information that you funnel up to your chairs and vice chairs that you actually provide a synopsis so that they understand the gravitas and why it's germane.

We all have a number of things going on, but at the same time anything you can do to try to help us understand and comprehend a 100 page report would be very significant. I would also encourage you to take the time to actually sit down and calmly read the statute. Look at the actual language of the statute, and keep that in mind when you conduct your activities and when you're looking at things.

We have an opportunity to address a lot, we do not have time to boil the ocean, so we need to keep focused on what we're doing. Let me also encourage you, as we said before, we are not going to be able to create a bunch of work. What we're going to be able to do is borrow a lot of work.

To quote an undergrad professor of mine, "When you take someone else's work and tell a few people, that's plagiarism, when you take somebody else's work and tell a lot of people, that's research." So we are going to research, a lot of research. So I would encourage us to remain focused. I would like to meet with the working group chairs after the meeting, and I would just like to open the floor now for any comments by the committee members.

Mr. O'Brien?

MR. O'BRIEN: I haven't said anything else.

I think all of us, most of us on this committee or a lot of us anyway are probably very familiar with different aspects of the services we're able to provide over communications networks. I think that certainly from my perspective listening to the people that have appeared before the committee today to give us some grounding, some sort of reality to the kinds of problems they're trying to deal with is, for me anyway, very, very helpful, so thank you all.

MR. BUGEL: And, again, I think everyone will have ideas and thoughts about who to bring before the committee to present evidence. Work with your working group chairs to vet those opportunities. It will require some planning. The staff will arrange for those visits to be made, right? Okay. We'll communicate up through staff.

Mr. Roskind?

MR. ROSKIND: Just have a procedural question about the working groups and its requirements under FACA. What are our requirements for reporting, the working group?

MR. BUGEL: I will defer that question to the federal officer.

MS. FOWLKES: Basically, in terms of the informal working group, and this would be whether the

Federal Advisory Committee Act, which I think is what you're referencing, applied or not. Essentially, the formal working group's responsibilities are to develop the recommendations or whatever is going to go into a report, do the research.

That would all have to come through the full committee. So that's basically it in a nutshell. The informal working groups can certainly do things, like if there are people who are not on the committee and you want to get them on a conference call to talk about issues or get their viewpoints on something you can certainly do that.

One of the things about this advisory committee is that its authorization is through the 9/11 Commission Act, and so the Federal Advisory Committee Act does not apply to this particular committee. So a lot of the requirements of that Act don't apply to the committee as a whole, although there are certain things that we're going to try to do, like having public meetings like this one and trying to have as much transparency as we possibly can.

In terms of what the informal working groups can do, certainly you guys can't act like the committee, and so you can't bind the committee.

You're basically research, developing initial recommendations which would ultimately have to be voted by the full committee before the report can go to Congress.

Certainly as you guys are going along if you have questions about what the informal working groups can or cannot do or what the committee can or cannot do, as Jim mentioned, Jean Ann Collins from the FCC will be giving a lot of help and support to the committee, and her staff will be giving a lot of help and support to the committee.

So I would certainly encourage all of you to raise those type of questions with Jean Ann, or with Eric Werner, or with me as you go forward.

MR. BUGEL: We are the deliberative body. We have an obligation to deliberate, we have an obligation to provide the report under a consensus, simple majority, that's very straightforward, and we are congressionally chartered, as Lisa said. So we have a broad range, and if we do have any questions, you know, just raise your hand, we'll get them answered quickly.

As I said earlier, we are right now working on a proposed outline of how we envision the working groups moving forward. I'll be working with the

working group chairs and vice chairs on the development of that, share that with you as soon as we can. Again, I don't want to harp on it, but we have a short period of time.

We have the holidays lumped in there, everybody has day jobs with tremendous obligations and responsibilities, so if we can get as much done as we possibly can and move forward. Furthermore, if a working group feels that they're moving faster than the phases that have been laid out in the program, that's open for negotiations, too. Absolutely we can move forward faster.

So, again, I want to thank everybody and get out a little early. Mr. Corry?

MR. CORRY: This is the first time I've ever participated in something like this, so I'm eager to make a good, positive contribution. I'm struggling a little bit with the mission and primarily because of definitions. The example I would use, and we kind of talked about this on the phone a week or so ago, what I'm struggling with and what I want to put on the table while the whole group is here is that the word network means different things to different people.

For example, to the folks from New York State HERDS is a network. To me, coming from a

cellular and a satellite communications company background, HERDS is not a network, it's an application. What I'm struggling with is is our mission to evaluate, and assess and make recommendations about the technical connectivity type network or are we also looking at not only the technology but the applications that people can put on a company's technical network to bring them together?

I'm just a little confused, and I want to make sure that I don't go off half cocked.

MR. BUGEL: Let me refer you back to Section 2201(c) of the Act, our guiding principles here, I think the third sentence. The Joint Advisory Committee shall be composed of individuals with expertise in communications technologies, emergency medical and public health care.

Part 2, subsection (c). Assess options to improve integration of communication systems used by emergency medical and public health facilities with existing and future emergency communications networks. The statute pays deference to the assignees. We are the experts. It is in essence we understand the network to be that element or elements upon which the end user's requirements are fulfilled.

That could be an application, that could be

the core network, that could be the RAM. That's how I interpret that. Now, in consultation with your working group and your working group chair if you narrow or broaden that, you know, that's your discretion. I will tell you from experience legislative language is not always precise.

We do have room for interpretation. So I think what we need to do is interpret it in a fashion that makes sense for us relative to who is in this room, relative to what everyone understands is the challenge that has been pointed out for us by others and many in this room have pointed out, so I hope that.

MR. CORRY: Yes, that was very helpful.

MR. BUGEL: Anything else?

(No response.)

MR. BUGEL: Well, with that, we will adjourn. Again, thank you very much.

(Whereupon, at 1:45 p.m., the meeting in the above-entitled matter was concluded.)

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REPORTER'S CERTIFICATE

CASE TITLE: Joint Advisory Committee Meeting

HEARING DATE: October 29, 2007

LOCATION: Washington, D.C.

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the Federal Communications Commission.

Date: October 29, 2007

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