

NWX-DOC-NTIA-FIRSTNET  
Moderator: Karen Miller-Kuwana  
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10:30 AM CT

Edward Horowitz:

Thank you, Operator and good morning to everyone, and welcome to Jackson, Mississippi. Before I convene this meeting, I would like to begin with asking our new Board member, Billy Hewes, who's the mayor of Gulfport, to say a few words of welcome to this Magnolia state. I will share with you that I had the opportunity to go down to Gulfport on Sunday and get some of his hospitality firsthand. He welcomed us, brought us home, fed us, let me sleep in his grandmother's bed overnight on Sunday night, and then on Monday, we drove from Gulfport here to Jackson with a – with a constant -- with Billy being our tour guide, with constant landmarks, and stopping along the way at a couple of his favorite places because he used to do the commute quite often. So, Billy, over to you.

Billy Hewes:

Thank you, Mr. Chairman. I cannot overstate the delight we have in welcoming you to the Magnolia State and the ability to host you, and we kind of hope you learn what we're about, but also take part in what I think is a momentous, very meaningful ceremony today that's going to have a huge impact on rural America and how we – how we serve them as a First Responder Community. You talk about legendary hospitality in Mississippi. It's no accident, and I hope you enjoyed the reception at the governor's mansion last night. I was talking to Governor Bryant today and said how everybody was raving about it. He said, that's just what we do! He's very approachable, as y'all saw, but we like to say down here in Mississippi, you get the South's warmest welcome. Right, Damon?

Some of y'all are first-time visitors. Many of y'all have returned, but we're in the business of making ambassadors every day. Mississippi gets a bit stereotyped and stigmatized sometimes, and it's about breaking down barriers and learning about our culture, and we're in the business of creating those ambassadors every day. But you may not know, even though you've learned some things, that, you know, Mississippi is a true land of innovation and creativity, and you can trace -- I'm a music junky, if you didn't know by now, but you can trace every genre of American music to Mississippi. Every single one. So the roots are here, and this is what drives us, and, you know, BB King, Elvis Presley, Faith Hill,

Jimmy Buffet, and literary masters who have really defined the American landscape as far as writing, Faulkner, Welty, Williams - Tennessee Williams, John Grisham. And then the cuisine that you enjoy. So, we hope you've gotten your fill and hope you'll come back for more. You know, Coca Cola was founded here, created here, and so was Bart's Root Beer. And so, it should come as no surprise to you that the center of innovation for telemedicine in Missi- in America is right here in Mississippi. So, I'm just glad to be able to play a role, and I'm honored to be amongst you as a Board member, and hope to be able to contribute. But thank you again for your graciousness as well, and we are looking forward to your return trips. Thank you.

Edward Horowitz:

Thank you, Mayor Hewes. I might also add his ability to rattle off all these stars of music are partially because he is one himself, a musician himself. He writes, he plays, and he's got this amazing guitar collection at home. So thank you again. And thank you for welcoming us to Jackson. And we're excited to be here, and for the opportunity to participate in the demonstrations with the Hattiesburg Local Emergency Response Technicians and the University of Mississippi Medical Center that we'll talk some more about. In fact, we just wrapped up announcing a new collaboration with the university, and with FirstNet, and we're pleased to welcome Damon Darsey, Medical Director for the Mississippi Center of Emergency Services, to talk more about that - this effort between the two organizations a little later on in the agenda today. We're also excited to have Andy Geske from the Hattiesburg AAA Ambulance Service here to participate in today's Board meeting as part of the FirstNet Subscriber Spotlight.

FirstNet is the only nationwide network with a commitment to rural America, and the first responders who serve those communities, and we look forward to hearing from Hattiesburg to further understand the needs of rural responders and how our collaboration with UMMC will be an important part of the future for FirstNet and our nation's rural first responders.

This month of March marks a number of milestones for FirstNet. Five years ago, seems like decades, the FirstNet Board introduced a road map with a goal to lead the FirstNet Authority from consultation to the issuance and award of an RFP, and then to the initial deployment of the network. And of course it was only two years ago that we awarded the contract to first deploy AT -- FirstNet to AT&T.

Today, at the university and here at our Board meeting, we're setting the course for the next phase of FirstNet, to advance the network that we now have, and is deploying nationwide, and to continue to drive innovation and the public safety marketplace for broadband communications. FirstNet is the transportation system. It's the mechanism. It's the artery. It's the veins, it's the capillaries that will allow people to communicate in a unified manner.

The power of what we're building occurs at the ends, with the individuals, with the technology, with the dissemination of information and data transfer, and done in an organized manner. That's the power of FirstNet. FirstNet, as a network, is devoted to first responders. It is geared to first responders. Today when we signed this MOU, we kicked off a program whereby we will be able to better understand the needs of rural first responding community. And understand how do we translate that into network performance, how do we translate that into a strategy that we can deploy nationwide.

FirstNet is now a reality, and as the deployment continues, we're going to look for ways to add value to advance FirstNet experience and drive innovation for public safety. Public safety has always -- input has always been important to the success of our efforts, and through their feedback, they are shaping their network. It's very important to - to understand that. We're not telling people what to do. We're trying to figure out how do we focus our resources, our staff time, our investment dollars for the biggest impact and value to public safety.

So with that overview, let me get on to the business of the Board meeting. Today's agenda includes committee updates and a network program update. Talk about the UMMC presentation, the CEO and strategy update. We have some resolutions of the FirstNet Authority's Investment Principles. We're going to have a subscriber spotlight with the Hattiesburg AAA Ambulance Service that I talked about before. We're going to have an update on the PSAC, that's the advisory group comprised of 43 associations that advise us on a regular basis, and to close, we're going to have an update on FirstNet's strategy and a wrap-up from Ed Parkinson, our acting CEO.

So to kick off this meeting properly, I'd like to ask our Board Secretary to call the roll for the entire Board, and confirm that each committee has a quorum. Madam Secretary?

Karen Miller-Kuwana: Thank you, Chairman. Edward Horowitz?

Edward Horowitz: Present.

Karen Miller-Kuwana: Richard Stanek?

Richard Stanek: Present.

Karen Miller-Kuwana: Richard Carrizzo?

Richard Carrizzo: Present.

Karen Miller-Kuwana: Welton Chase?

Welton Chase: Present.

Karen Miller-Kuwana: Neil Cox?

Neil Cox: Present.

Karen Miller-Kuwana: Brian Crawford?

Brian Crawford: Present.

Karen Miller-Kuwana: Billy Hewes?

Billy Hewes: Present.

Karen Miller-Kuwana: Ron Hewitt?

Ron Hewitt: Present.

Karen Miller-Kuwana: Tip Ostherthaler?

Tip Ostherthaler: Present.

Karen Miller-Kuwana: Paul Patrick?

Paul Patrick: Present.

Karen Miller-Kuwana: Christopher Piehota?

Karen Miller-Kuwana: Richard Ross? We're having some technical difficulties. I know that Commissioner Ross is on the line, but we're having some

difficulties with hearing, so I think I just heard you, Commissioner Ross, thank you. Teri Takai?

Teri Takai: Present.

Karen Miller-Kuwana: Dana Wade?

Dana Wade: Present.

Karen Miller-Kuwana: Thank you, Dana. David Zolet?

David Zolet: Present.

Karen Miller-Kuwana: Chairman, we have a quorum for both the Board and each of the four committees present today.

Operator: Richard Ross –

Karen Miller-Kuwana: Thank you.

Edward Horowitz: Thank you Madam Secretary.

Richard Ross: Present.

Edward Horowitz: Excellent, Thanks.

Karen Miller-Kuwana: Perfect. We have a slight delay, so we do apologize. I'm going to also –

Richard Ross: I'm here.

Edward Horowitz: You got it.

Karen Miller-Kuwana: Thank you, Commissioner Ross.

Edward Horowitz: So FirstNet does not have this kind of delay on it.

Dana Wade: Present.

Edward Horowitz: There you go.

Karen Miller-Kuwana: I also want to just quickly state, for the record, that we, prior to participating in this FirstNet Board and combined committee meeting today, the Board members have had the opportunity to review the agenda, as well as the conflict of interest guidance that's

provided by our Ethics Law and Program Division of the Department of Commerce, Office of General Counsel, regarding the conflict of interest standards that apply to the Board members. All of the Board members have responded that they do not have a conflict, and will not need to recuse themselves from participation in any portion of this meeting today. Thank you. And as a general reminder, if you are on the phone, can you please make sure to mute your microphone. Thank you.

Edward Horowitz: Thank you, Karen. So each member of the committee has before him or her the minutes of our March Board meeting. Are there any additions or corrections to these minutes at this time? Seeing none, I will take a motion that we accept these minutes.

Tip Osterthaler: So moved.

Edward Horowitz: Thank you, Tip. Is there a second?

Paul Patrick: Second.

Chairman Horowitz: Okay. Paul. All in favor say aye.

[CHORUS OF AYES]

Edward Horowitz: Opposed, indicated by saying nay. Hearing none, abstentions, none, okay, the meeting minutes are accepted, Madam Secretary. Please make the minutes available to the public following this meeting.

Karen Kuwana-Miller: Will do.

Edward Horowitz: We're going to start out with an update from the Governance and Personnel Committee. On behalf of the FirstNet Board, I wanted to begin my update with my deepest condolences to the friends and family of our former Board member, Ed Reynolds, on his passing earlier this year. Ed Reynolds was a founding member of the FirstNet Board, serving from 2012 to 2018, and was dedicated to making this nationwide public safety network a reality. Ed truly valued the contribution the network would provide to first responders, and the impact it would have to the safety of the communities across our nation. As a Board member, Ed was dedicated and a valuable member of the Board's Finance and Technology committees. As importantly, Ed had a 40-year career with the Bell System that included working as the chief executive for a number of Bell South Wireless entities, and he retired as the

President of Network Operations for Cingular Wireless. And following an accomplished career in the wireless technology, Ed was inducted into the Wireless Hall of Fame in 2018. I actually knew Ed, had met him a number of times, way before my getting involved in FirstNet, and way before his getting involved in FirstNet, and he did represent true executive leadership in the field of wired and wireless communications. And having him on the Board, particularly in the early days, to help determine what it's going to take to properly define the FirstNet network, what it needs to look like, what are the objectives, and help develop that RFI was truly a remarkable accomplishment for which we are very grateful.

Just as first responders are dedicated to their job, Ed Reynolds was dedicated to the FirstNet mission, and he was a dynamic individual, and he was a combination of an engineer and an innovator. Sometimes it could be a little dangerous, but in his case it really was terrific. And we can always count on him to design a path for success and we will miss him as a friend. We miss him on the Board, but we miss him as a friend in this Earth -- on this Earth. So I truly want to say, in memoriam, thank you to Ed Reynolds, and I'd like to -- before I conclude, I'd like to see if there's anyone else on the Board or in management that would like to share some comments about Ed. So I'm going to open the floor. Teri?

Teri Takai:

Mr. Chairman, I know that many of the Board members here are new, but, you know, the early days of FirstNet, for those of you that track FirstNet, were a bit of the wild wild west, you know, we certainly are so happy to be where we are today, but in the early days, it was a lot of discussion around, you know, so many different alternatives, and I think to your point, Ed was always the voice of reason. He always made us think about what we were doing, and he also helped to kind of calm us down and get us on the right path. So, you know, certainly want to add to your comments and just, you know, certainly congratulate and celebrate his contributions.

Edward Horowitz:

Thank you, Teri. Jeff?

Jeff Bratcher:

Thank you, Mr. Chairman. Yeah. I'd like to say a few notes about Ed Reynolds, one of the original Tech Committee members, and I actually did not realize it until he joined FirstNet, but he was actually, when I worked in the private sector, the ultimate customer for some of the networks I was delivering at the time in Tennessee. He brought a fantastic wealth of knowledge to wireless networks,

and as we're hosting our meeting here in Mississippi, I actually had the pleasure of joining him on a trip with some of the Board members at the time to here in Mississippi, and he was a fantastic gentleman, and brought a lot of sound advice to the committee and kept things in perspective, and he's definitely going to be missed. Thank you, Mr. Chairman.

Edward Horowitz:

Thank you. Sorry that Sue - that Sue Swenson is not able to speak on the phone. I'm sure she's listening, and I know that she would have a lot to say, as would Chief Johnson, the Chair and Vice Chair just preceding my role. Anyway, so thank you very much, and Ed, we celebrate you, your life.

As FirstNet moves forward, along the path to success that Ed Reynolds and other members of the inaugural FirstNet Board laid out, we're turning our focus to how FirstNet can be a catalyst to drive public safety broadband network forward, and ensure a differentiated FirstNet experience that meets public safety's needs, both now and in the future. It is this focus to drive public safety broadband forward and ensure a differentiated FirstNet experience that brings us to Mississippi today.

Immediately prior to the Board meeting, Mississippi Governor Phillip Bryant joined Dr. Damon Darsey and executives from the FirstNet Authority to sign a memorandum of understanding between FirstNet and the University of Mississippi Medical Center to collaborate on innovation for emergency medical response and mobile broadband for rural first responders in Mississippi and nationwide. I'm pleased to introduce at this time Dr. Darsey, who has joined us today to talk about this collaboration between UMMC and the FirstNet authority and the importance of rural broadband to public safety throughout the state. I'm going to give you a little bit of background.

Dr. Darsey is an Assistant Professor of Emergency Medicine and Pediatrics at the University of Mississippi Medical Center. He's the Medical Director of the Mississippi Center For Emergency Services, an emergency response umbrella organization that includes a medical communications center, a critical care transportation center division, called Air Care, a public safety support division, and a traditional advanced life support ambulance service.

He first obtained his EMT certification in 1998 in Dallas, and earned his Bachelors of Business Administration from Southern

Methodist University in Dallas. Upon completing an education in Dallas, he returned to Jackson to complete a Master's in Science and Doctor of Medicine degrees from the University of Mississippi Medical Center, and he completed his residency in emergency medicine at UMMC, and both is Board Certified in emergency medicine with active clinical practices in adult and pediatric emergency medicine. Dr. Darsey has been involved in EMS for over 18 years, serving as an EMT, paramedic, flight paramedic, EMT, and now medical director in a number of different EMS systems. His clinical interest is in the field of emergency critical care and transport medicine, specifically focusing on innovation, increasing the scope of practice, and pushing evidence-based clinical advances to first responders on all clinical levels.

Before I turn this meeting over to Dr. Darsey for his presentation, we have a video that we'd like to share that highlights the incredible work that the Center for EMS does from the neonatal ambulatory care to air ambulance services across the State of Mississippi, to new broadband efforts to connect some of the most rural community hospitals in Mississippi to the medical center as the only Level I trauma center by a health - tech – health technologies. So roll the video, please.

[VIDEO]

Edward Horowitz:

So before Dr. Darsey begins his remarks, I would like to thank him. Yesterday, the Board had an opportunity to participate in a demonstration of all the things you just saw in this video. We saw Air Care. We saw S.W.A.T. come in with a hostage situation, injuries, evacuation, ambulatory care. Ambulance is pediatric ambulance. Kind of an emergency medical -- a rolling emergency room with the ability to accommodate six beds. So our team saw emergency medical trailer and it was quite extraordinary. So everything on this video exists. Everything is real. So Dr. Darsey.

Dr. Damon Darsey:

Well, thank each of you, or y'all, as we say here. Glad to have you in Jackson. It is easy to stand here or sit here and talk about what Mississippi has done, but in reality, it's the guys and girls that are outside these walls that are making this happen. And Mississippi has to innovate. We have to move forward because of lack of resources. And that's across the country in rural America. We have to come up with ways to make things better.

We've got a great team here and we're extraordinarily humbled and looking forward to, Mr. Chairman, the ability to work with you

guys, as we talked about yesterday. You have a great technology. As we've learned from our wonderful technology here in voice communications with our radio system, we have to have training and we have to have innovation, and we're looking forward to really not reinventing the wheel, but changing the wheel for data over voice and how do we make that better. So we're glad to be here. We hope that you return and see some other innovations that we will have here in the next coming years, and on a personal level, I've enjoyed meeting each one of you and talking with each one of you, and this time. We've got a good group here. We're very impressed with what you have, and we believe that this work together with you and this collaborative agreement that we've signed this morning, I think you saw by the number of dignitaries that were there and speaking to support how much Mississippi believes in this process. We can be the worst at everything in mortality, but that leads us to be the best at a lot of things, and public safety and communications here are extraordinarily good because of great people, some of which that are here today, and we look forward to working with you, Mr. Chairman.

Edward Horowitz: Thank you. And I open it up to

Richard Carrizzo: Doctor, representing the fire service and first responders, I think I can speak on behalf of my cohort, Mr. Patrick and the police, but we want to personally thank you for your innovation and yours and your team's vision to the future. I believe with this partnership, we are creating, you are creating a model for the rest of the U.S., and as first responders, we want to personally thank you. This is what this network was built for, is for the first responders. So thank you.

Edward Horowitz: Excuse me, Paul?

Paul Patrick: Thank you, Mr. Chairman. Thank you, Dr. Darsey. As a longstanding advocate for emergency medical services, and I'm also the director of Utah's Family Health and Preparedness Division, which includes EMS and trauma, I'm sure excited about the opportunity for the University of Mississippi Medical Services share the use cases, the lessons learned, the best practices related to public safety's use of mobile broadband in rural areas with the FirstNet authority and I'm also looking forward to gaining critical insight on how medical incidents are handled in rural communities and how new technologies like those related to telemedicine particularly will be used to improve medical responses, patients' outcome, and ultimately you're reducing medical costs to the citizens of not only Mississippi, but I believe it will reduce medical

costs to the citizens across the entire country. So Dr. Darsey and everyone else, thank you very much.

Edward Horowitz: Billy?

Billy Hewes: Dr. Darsey, I want to personally thank you for your focus. You have really pushed, and had an early understanding of just how impactful this can be, and as a fellow Mississippian, I want to echo Paul's excitement for this opportunity for collaboration between UMMC and the FirstNet Authority. We know this initiative is going to drive innovation for rural emergency medicine response here in Mississippi, and nationwide, and provide us with an added understanding of how the FirstNet Network can help first rural responders save lives and protect their communities, so it's critical, and this is at a perfect juncture for us, so thank you again for being the driver here.

Dr. Damon Darsey: We've got a great team and a great state of people working on this.

Edward Horowitz: Anyone else? I would just like to add to these comments and say we actually operate a network that goes in two directions. So one of the strengths of FirstNet is that we are seeking input from the first responder community so we can figure out what it is we need to do through FirstNet and its deployment. And as we as you have experiences that we capture here, we're going to move them out. As we experience things going on elsewhere in the country, we're going to communicate it. That's the power of what we believe our job is, is to make sure that whatever we do is in response to the needs of what public safety has for today, and then try to anticipate what is required in the future as well. So I would just indicate that this is a two-way network. So you're going to give, but you're also going to receive.

Dr. Damon Darsey: I think we've seen that with your staff, with Ed and with Justin and with others that have been here. We feel the two-way street, and we appreciate that from you guys.

Edward Horowitz: Thank you. So on behalf of the FirstNet Authority, I look forward to continue to working with Dr. Darsey, and as the whole team, as we move FirstNet out into the state.

Unless there are any other comments, I would like at this point to turn the meeting over to acting CEO Ed Parkinson and the Executive Director of Enterprise Strategy, Jeremy Zollo, for the CEO update, Ed?

Ed Parkinson:

Thank you, Mr. Chairman. It's a privilege to be back in Mississippi. I feel very fortunate to have come down here quite a lot over the last few years. It's an amazing opportunity. The MOU that we have signed today. We really do see the partnership down here with Mississippi as the cornerstone of the art of the possible. You know, the great work that the (unintelligible) team have been able to provide on a voice capable - voice capabilities is tremendous, and obviously the work that we will now be providing on the data side of this is a fantastic complementary service so to only strengthen the communications capabilities of public safety across the state. And I really think that, to echo the comments of Ed and the Senator and the Governor and the Secretary earlier this morning, this is the beginning, and really, this is the great thing about signing this MOU with Dr. Woodward, the University of Mississippi, and you, Damon, we can take this everywhere, and the lessons we learn, to echo Paul, is going to have an impact in saving lives across the country. So it's a fantastic time and it's a really exciting time and what Jeremy and I are going to do now is just provide a quick update to build upon the remarks we made back in December of where we stand as an organization as it relates to our strategy, the role that we will be playing as the network gets rolled out by our partners at AT&T, and we're very excited to see the AT&T team here in the room today. We thank you for the partnership.

What you see here in front of you today is a strategic vision that we have at FirstNet. And Jeremy will build on my remarks shortly, but what you've got here in this Venn diagram really illustrates not only the roles and responsibility that AT&T have, and also those that the Authority have, but really the partnership, and it is that partnership that's going to define FirstNet and the services that we will be able to provide going forward. Our ability to collaborate not only in the deployment of the system, but as future technologies come along, as they evolve and as the threats facing public safety evolve. I know Richard, you would probably be able to talk about that a lot better than I, the way that fire has to respond and the way that things have to evolve, we have to be able to provide solutions that evolve with those to ensure that public safety has the type of communications capabilities from a data centric system and one that is dedicated.

So I'll step back and let Jeremy build upon my remarks.

Jeremy Zollo:

Thank you, Ed. What we're trying to create and make sure is an experience, something that you don't get in any other carrier out there, and just echoing what Ed said, the great work we've done to date in securing the contract, working with AT&T in a partnership to deploy the network nationwide has been extraordinary and rapid in how we've been able to get nationwide coverage so fast. What we're going to focus on in these next few slides is really taking a look at how we come together as FirstNet the Authority, to work and collaborate and communicate to public safety on how we envision advancing the network, and communicate in a very transparent way on what's important to public safety.

So what do we do as FirstNet the Authority? It's really quite simple. At the core, we'll always be the contract. We'll always focus on creating this experience for public safety. Truly a differentiated network. But we really are looking to do four things as we move forward: Engage, develop, invest and collaborate. Engage with public safety, industry, associations to learn from them, understand what's driving them, what their operational needs are, what they need out of a network. Develop a road map, which we'll get into in the next few slides, which is a very public-facing way of us communicating with industry and public safety on how we're going to advance that network.

And then identifying opportunities on how we can invest in the network and further differentiate this network, and not just through dollars, but through time, resources, policies, procedures, things we can do together with public safety to ensure that they get the most out of the solution that we put into their hands.

And then really collaborate on the investments we make, collaborate to help realize how the network is performing, realize how public safety is using the network and the challenges that they have today, and coming full circle, the road map that we build will be a living, breathing document. We'll update it annually and we'll work together with public safety to make sure we're always addressing their needs.

So what is the roadmap? We like to put it in really three simple areas. One is it's a vision for how we will advance the network in a two to five year window. We want to look out in segments of what's important to public safety. We want to capture the needs of public safety. A lot of feedback that we've been getting initially is technology isn't the only problem that public safety faces. There's operational needs. There's policies. There's procedures. There's

laws that hinder public safety from enabling to them to use the full power of the technology that we could put in their hands. So we have to be familiar where public safety is taking on challenges operationally, or they're taking on policy challenges and work and collaborate them to understand those needs so that we can take them to industry. We want to incorporate and understand where industry is going, where large tech vendors are going, where application developers are going, where are they investing their time and their money and their resources, and how do we bring public safety's needs to them so that they can invest back in public safety and get solutions out there for their use.

And then what we want to do is take that roadmap and really inform and identify opportunities for where we need to advance the network and where we need to invest our dollars that we have.

Ed Parkinson:

This is a key thing that we have to really focus on. The fact that we're able to work in partnership with AT&T, using the power and the length and breadth that that organization has, which can incorporate new technologies, new entrance into this public safety broadband market, that FirstNet is really leading. I think it is one of the differentiators that we can provide that no one else can, and it's through the power of this public/private partnership we'll be able to incorporate these industry trends and drivers from applications to devices and to future technologies that is going to really spearhead the movement that public safety is going to see and the improvements that public safety will see for many years to come.

Jeremy Zollo:

So how do we take this to the next level and how we begin to engage public safety is we wanted to create this framework around the road map of where we want to engage and what we want to talk about. These are the five areas in which, when we have an engagement with public safety, as we move forward, we're going to be talking to them about these areas: Coverage and capacity, situational awareness, voice communications, secure information exchange, and the user experience. We want to drill down with each of the disciplines and understand what their needs are, how they're using Broadband technology today, how they're adopting Broadband technology, and what are the barriers they have to adopting technology and solutions that are out there. So this is where we want to be transparent. And the road map will culminate in our understanding of how we've collaborated with public safety, what their needs are, and then an assessment of where we see the network and industry going and investing their time, their dollars

and their resources and solutions that could be viable for public safety's mission.

And what you'll see in the next few segments, as Jeff Bratcher and Dave Buchanan give their parts of the briefing is how we as an organization are beginning our engagement plans, how we're going out there with public safety, how we're going out there with industry, and then how we're continuing to monitor and advance the network through the contract that we've put in place with our partner, AT&T.

Ed Parkinson:

And at the local level, this is something we're really excited that the WCC (Mississippi Wireless Communications Commission) is committing to. You know, Willie (Willie Huff, WCC Chair) has been a tremendous partner over the years, and obviously the land over radio capabilities that you guys can provide, that's not going anywhere any time soon. We, as a Broadband services, the complimentary services that public safety will be leveraging, so we had a terrific meeting with them just the other day, and the commitment that they gave to ensuring that we can work together going forward here in the State of Mississippi is exactly an example of the kind of partnership that we want to see, we want to grow. And again, just another indication of how Mississippi is really leading the nation in advancing public safety communications throughout the nation.

Jeremy Zollo:

So when we come back this time at the next Board meeting, we will have a roadmap and a vision that is built that begins to communicate externally with everyone on how we are looking to advance the network and how we're looking to continue to engage for public safety to make a difference, and it's the commitment that the organization has always had and always will have, which is to make sure we put public safety's needs first, and we make sure that we represent that in all of our interactions, whether it be with our partnership through AT&T or with collaborating with other technology vendors or providers to get the most out of the network and to make sure that public safety gets what they deserve and gets what they need on this network.

Ed Parkinson:

Thanks, Jeremy. So next up, we are going to hear from our Public Safety Advocacy team, led by Sheriff Stanek.

Richard Stanek:

Yeah. Thank you, Ed, and Mr. Chair and members. There we go. Perfect. All right. Thank you, Mr. Chair and members - Ed. The public safety advocacy team met in a – in a work session

yesterday, had a good robust discussion. Thank you. As, you know, we are looking forward, as a committee, as a working group, to look in advancing the Board's mission with respect to FirstNet and the experience and being a part of that. Just a couple of highlights. You know, the FirstNet team, the outreach team had over 100 engagements last month alone, and that getting out there with police, fire, EMS, public safety officials nationwide is tremendous, and as we look at this, Dave Buchanan is going to go through, talk a little bit more about what we discussed yesterday, but really what the future holds for this committee and the outreach to public safety. David?

Dave Buchanan:

Thanks, Sheriff Stanek and thanks, Mr. Chairman, for the time today. I'm going to use my time today to describe how we're going to use our Public Safety Advocacy team to populate the roadmap that Jeremy just described with public safety's feedback and needs over the next 90 days.

For those of you from public safety who may be watching the Board meeting today, this slide and the highlights this slide should look familiar to you. Since 2013, we have been engaging public safety to capture your needs, to produce results that deliver for them their public safety broadband network. This year, we're going to use these same engagements to capture information to inform the roadmap to ensure that the investments and enhancements that FirstNet makes in the future meets public safety's needs. Through these engagements, where we'll be meeting with first responders, where they do their work and how they do their work and the variety of disciplines that they do their work will be focused on specific topics and issues that Jeremy described earlier around coverage and capacity, user experience, data management, voice communications, situation awareness, to best understand the operational needs that public safety has with the network, identify topics and issues that we can populate the road map with and identify the gaps that we can potentially fill through that roadmap. Again, with the focus on meeting public safety's needs for the roadmap.

I want to highlight a number of engagements we've done just this year. Sheriff Stanek mentioned we complete, on average, about 100 engagements a month. There's a number we wanted to highlight here starting on the left. The Boulder Police Department in Boulder, Colorado, on January 31st, we had an engagement to better understand their operational needs and begin to discuss the early roadmap topics with the Boulder Police Department. Just two

weeks ago, we were in College Station with Texas A&M, the Public Safety Innovation Day, where we invited representatives from the Major City Chiefs, the International Association of Chiefs of Police, the International Association of Fire Chiefs, the Metro Fire Chiefs, the National Sheriff's Association, a number of other professional associations that represent first responders, to begin that dialogue around road map priorities. Those five topics I mentioned, we were able to have in-person discussions and dialogue to best understand first responders' needs under the network under those topics.

Just last week, we were in Baton Rouge, Louisiana, where we were able to again, have a statewide inter-operability meeting to discuss the operational needs, including discussions around Push-to-Talk and other technologies to again have that first-degree, firsthand feedback from first responders about their needs for the network going forward. And in a little bit, you'll hear me describe some of the work we've done with the PSAC, the monthly webinar series around Mission Critical video in January and roadmap priority last month, continues to be an important way to get feedback from the members of our Public Safety Advisory Committee.

I do want to drill down just a minute on the recent Michigan Inter-Operability Conference that we participated in, our team, from Michigan, was able to present at this statewide meeting the 200 public safety professionals and first responders that traveled to this meeting in Traverse City last month. We were able to use information capture technology using smartphones from the participants to get real-time, quantitative feedback around mission-critical video and around the user experience. Again, these continue to be the new content we bring to these meetings to get that, again, firsthand, first-person feedback about the roadmap, about the operational needs public safety has on the roadmap, understand their use of the network, their needs under the network, and again identify those gaps that potentially could be filled through our roadmap. I want to thank the Michigan team again for partnering with us in this event. To get that increased understanding from first responders, to be able to share our best practices and use cases with first responders on how to optimize the FirstNet Network was a great take-away for us and we look forward to continuing these kinds of meetings going forward.

As I close, I'll mention to the Board between now and the next Board meeting, we're really focused on four things. One is to continue to deliver those 100 engagements a month, where we'll

populate the roadmap through those engagements and bring roadmap consultation to each of the everyday engagements, meetings, conferences, focus groups, outreach that we do with public safety and our team in five time zones does every single day. Second, is we're going to continue to engage directly with public safety agencies at the agency level to best understand those operational needs, at the individual level, the agency level. Again, continue to capture those use cases for the network and understand the operational needs that first responders have for the network.

Third is to collaborate with the PSAC and use our monthly webinar series and our in-person meeting in June to have an in-person prioritization discussion and consultation around our roadmap and to use as an opportunity to validate the roadmap. And fourth is to hold an in-person public safety roadmap summit. We're planning for May. We'll have with a number of representatives from across the variety of public safety disciplines to again have that in-person dialogue around the roadmap, have consultation around the topics, get a better understanding of the public safety's needs under that network, and use that information to, again, populate the road map and have a -- really have a full understanding of what public safety needs and expects out of network. Thank you, Mr. Chairman. I'll answer any questions you might have.

Edward Horowitz:

So if I may just add something, Dave. I had the opportunity to participate in the event that we had in Texas at the TEEX's Public Safety Innovation Day, Texas Engineering Extension Service, Product Development Lab. It was a full interactive day. We had our team from - we had Jeremy there, Brian Hobson, Markly from - Harry Markly, law enforcement, we had Bill Shrier, we had Michael Ralph from fire. We had our experts in the room, and it was four simultaneous tracks, everyone who showed up that Dave recommended - mentioned, rather, was in each of these tracks. Everyone went through every single topic, coverage, robotics, application environments, operation requirements, and there was real-time feedback by virtue of a tablet that was there so people could provide input and set priorities. It was really eye-opening, and it is truly the method that works. Get out to the community that is using it, large, small communities, rural, urban, suburban, cross-disciplines, see where there's commonality of requirements, not telling them what they need, but rather hearing from them what they need, and it was a terrific day.

I might also add that I had an opportunity to go over to a facility that's on the Texas A&M Campus in College Station called Disaster City. It was described to me, you could blow it up, you can start a fire, you can put it out. They had buildings that collapse with first responders to try and figure out how do you rescue people. They had fires they could start in an oil rig, oil tanks. They had train wrecks, garage collapses, and it was just -- for me, not only was it real to participate in our -- in our innovation day, but it was also real to understand that this nation has a facility, which I'll call a national asset. And I know there's other campuses, and there may be other places, where people go to train, but it was just an eye-opening experience. They had airline fuselages that they could set on fire and put out with foam and what have you.

So it really gives relevance and reality as to what we're doing here. And gathering the requirements, as you're doing, and then making sure that we set our priorities against this roadmap, that will then help us decide how do we want to invest in the areas of coverage and other things is - was made really quite evident. So thank you very much, Dave, and thank you to the team that went down there.

Dave Buchanan:

Thank you.

Edward Horowitz:

So who's up next?

Karen Miller-Kuwana:

Jeff Bratcher.

Edward Horowitz:

Jeff Bratcher. Thank you.

Neil Cox:

Before I turn it over to Jeff, who is our Chief Technology and Operations Officer, first of all, I'd like to thank everyone here in Jackson for the hospitality and really the education that you've given everyone on the Board. With the Hattiesburg Ambulance AAA Service, and the presentations with the University of Mississippi Medical Center, it really is good to -- and I'm Chair of the Technology Committee, but it's really good to get this firsthand experience. And as I was setting through some of these presentations about the need for the telemedicine in rural communities, and I live in Chicago. I can go five miles north, south, east, or west and be at a major hospital in five miles any way I go. It's completely different.

So when you look at what we're doing here and the importance of this network for rural America, and to know that this network is always going to work, it's going to have the same standards and

quality, whether it's in downtown New York or in some small community out, it's always going to work. And by the way, there will be disasters that will tear it down. We can't stop Mother Nature, but we have made investments in technology that we can stand it back up very quickly. So whether that's a drone or it's a cell site on wheels, this network is designed for public safety, by public safety, and those technologies that run on it are going to be what makes this a success.

What made cellular success was the device that went on the end. It was a smart phone. When we had voice communications, you know, cellular was built for a car, and then it evolved into what it is today because the device on the end got smarter. And that's -- I get so excited when I see agencies willing to push the technology, whether it's a smart device in an ambulance or it's telemedicine or it's a modem in a very sophisticated piece of - of equipment. That's what's going to make this a success. And knowing that you have a network that that technology can always run on, that will always work, that will have standards that we will hold our vendor to is very, very important. So I get excited. I learn a lot when I come out here. And the hospitality here, Billy, has been unbelievable. Food, too. But to learn. I mean, I learned about Smart911. I did not know about Smart911. But I've learned about that here on this trip, and it's good that we as a Board get out and spend our time with those of you that are doing the job daily that this network is built to support. So, I do thank you. And with that I'm going to turn it over to Jeff Bratcher to go from there about the Technology Committee report.

Jeff Bratcher:

Great. Thank you, Mr. Chairman, I appreciate that, and thanks again to Dr. Darsey for the demonstrations we saw. I think I speak for all the staff that were able to participate and show how it's bringing and making the network real for a lot of the uses and things they are going to use on this network going forward.

I'm happy to report on some significant progress we've had in engaging – in engaging many of the segments of the ecosystem, with the emphasis going to be driven by our roadmap opportunities. As mentioned five years ago at this Board meeting, we moved out on a strategic road map for FirstNet. Based upon the mandates within the 2012 law that created the FirstNet Authority. And again, the goal was to lead us from consultation to a business plan for the RFP, and then to an award and an initial deployment of the Nationwide Public Safety Broadband Network, that as the law prescribes, is based upon a single national network architecture

leveraging the nationwide Band 14 license that public safety advocated for and long and hard to congress to get the license and be used for their network.

We followed through and successfully educated on that strategic roadmap, and now a new marketplace exists focused on public safety's communications needs. Because of the work we have done listening to, working with, and investing in public safety. None of this was happening in a cohesive fashion before FirstNet and public safety came together and started driving this forward, and then with our network partner, AT&T, delivering the network.

Public safety input and their needs were used at every step of the way in the early strategic roadmap development. We remain committed to that public safety will continue to be in the driver's seat, as we enter this next phase of FirstNet for our roadmap of investments that Jeremy and Ed talked about earlier, again, back into their dedicated network.

I'll hit on a few highlights over the last month, several months that we've had. Again, driving and engaging on the ecosystem in December, we hosted the Technology Committee in Boulder, and they visit us for briefings and lab tours with the goal of assessing and alignment of our efforts to engage in this broad ecosystem. And some of the early view of our roadmap opportunities. We had briefings on some key roadmap components, as well as a tour of the dedicated FirstNet Innovation and Public Safety Broadband Lab that is co-located within our offices in Boulder. We also visited -- took a trip across town and visited with our research partners at the Public Safety Communications Research Program on the NIST campus there in Boulder. Some of the briefings included a roadmap look ahead on products and services, coverage, location-based services, our experience program and efforts, some of our new capabilities within the lab related to cell site loading on the applications and devices. Lab tours, again, for PSCR at their labs, some of the indoor mapping and ten-year look-ahead R&D that they are funding now across the world, not just focused in the U.S., with their grantees and partners that they funded through challenges and grants. And their upcoming tech protect challenge that will be announced later this year.

In January, the team was at the Consumer Electronics Show, and with guidance from our executive and Board leadership, the FirstNet Authority attendees specifically targeted engagements, presentations, and the vendor booths focused on two real themes:

the vendors that are developing public safety focus technologies, as well as those vendors in complimentary verticals that are developing technologies that could be leveraged by public safety in the future.

Some of these examples include internet of things, sensors, sports biometrics, location tracking devices, artificial intelligence, as well as a host of others. And the team took full advantage of the event for engaging on the ecosystem with over 100 meetings with different vendors and public safety entities.

On quality service priority and pre-emption, we continued to improve our capabilities out in the Boulder lab. We've done increased integrations, service and testing. We now have achieved maximum cell site loading capabilities in the lab to simulate the public safety users' experience in many different types of congestion scenarios. And with our specialized test equipment, we can now load a cell site with thousands of simultaneous data sessions and ensure that the FirstNet subscribers' priority and pre-emption features are working as designed and implemented. We're really proud of this fact, and open that for public safety to visit and see how that actually happens. This, again, is a significant expansion of our ability to determine how these different services, devices, and applications will behave on the network going forward.

And I'm pleased to report to the Committee that we're now able to validate and verify that end user experience under these varying load and congestion conditions right there in our lab in Boulder. We've also entered into video analytics research, a collaboration activity, with this and our ability to load cell sites, we're supporting the research of a nationally recognized, federally-funded research and development center with the MIT Lincoln Labs, and they are researching video analytics specific to public safety use cases, and we're leveraging our lab to benchmark against real-world situations. This is one of the PSCR grantees, and we're really excited about that collaboration.

In February, the team attended the Mobile World Congress in Barcelona, and engaged leading vendors of public safety devices, applications, and network equipment, and observed a public safety context to wear a heart rate monitor via a wrist watch with network connectivity. Many vendors we engage with want to follow up with FirstNet. Again, we're driving this worldwide market for

public safety, and that realization is prevalent now at these different large-scale conferences that we've been attending.

We successfully achieved the public safety user experience in our lab via the AT&T enhanced push-to-talk testing environment, and that will lead to the future mission critical push to talk mission as well once that service is announced on the network.

Moving on to March and what we've been focused on this month. Again, engaging with that application developer community, we've maintained an active process for market research and engagement with application developers that are truly focused on developing apps for public safety's use and needs. We're doing so with greater alignment to the opportunities identified in our roadmap to maximize the impact of these ongoing developer engagements.

As we'll see in a bit, a future - future slide here, the outreach and success with that community is accelerating as more solutions and apps are now being included in the FirstNet applications catalog, and on the NIST maintained list of certified devices for the network. We've been actively collaborating with NIST PSCR on the definition of public safety use cases and challenge criteria in support of their upcoming tech to protect prize challenges that's set to launch with the application developers later this year.

And then the roadmap-based Experience Program. As part of our public safety engagement efforts, FirstNet Authority is developing an experience program for public safety that will allow them to discover current and future technologies, understand the value of the FirstNet network, and experience solutions in a way that's relevant to their mission operations. We're focused on the early view of the roadmap to define these compelling public safety experiences and identify those opportunities for ecosystem participation. As Dr. Darsey presented earlier, we're pleased to be here in Jackson, Mississippi, to launch a collaboration with the University of Mississippi Center for Emergency Services to again drive innovation in rural emergency medicine and response into the network.

And this is one of first of many more to come for early stage collaboration, supporting our FirstNet roadmap-based experience program.

Quick touch on public safety and standards, developing standards specific for public safety in these – in these devices, products, and

road maps. A key responsibility, as outlined in the enabling legislation, was for FirstNet to represent public safety's needs and advocate for their needs into the standards-based solutions for public safety. We have a dedicated, experienced standards team that maintains active leadership in that primary standards body that defines these standards. That's the Third Generation Partnership Program, usually referred to as 3GPP, and this is actual live sites from some of those meetings attended by thousands of attendees worldwide. And this organization again is at the forefront of the standards leverage not only in the U.S.A., but globally. This is a recent example of how FirstNet staff and support with the AT&T staff are influencing the ecosystem through standards that will continue to enable the public safety mission. FirstNet coordinates all of our activities across multiple 3GPP working groups in order to deliver a complete end-to-end unified access control framework that supports the future mission critical services, and we've been able to do this by continuing to build our coalitions with other governments and vendors that participate in these meetings to ensure acceptance from the 3GPP bodies. Some of those governments include the United Kingdom, Finland, and South Korea, as well as with our own Department of Homeland Security, and in addition to our network partner AT&T, numerous other vendors are now supporting public safety's needs; the marketplace is understanding this is a large marketplace worldwide. So we're really excited with that aspect.

We're proud that these FirstNet contributions were accepted and will become part of the most current 3GPP standards.

Touched briefly on applications and devices aligning to our roadmap. We're advancing and building the device applications ecosystem for public safety through our roadmap efforts. Nowhere is this more evident than in the expanding apps and devices ecosystems. Again, we heard from public safety that achieving a rich and diverse application and device portfolio is vital to the success of their network. We're working closely with AT&T to influence development of the apps and these specialized devices as well that focus on those needs. Applications are continuously being approved for our applications catalog. Dozens of apps in the catalog to date. To ensure the apps in the catalog meet the highest standards demanded by public safety, all of the apps submitted to the catalog go through a testing and evaluation process and only those apps that successfully complete this process are included under two different designations within the catalog. They're either

FirstNet listed or FirstNet certified, and the two different logos, you can see there on the upper left.

All apps that meet the criteria for relevancy to public safety and have the security and data privacy needed for listing on the FirstNet apps catalog are under the listed category. FirstNet certified means the apps meet the criteria for relevancy, security and data privacy, but have also gone through availability, resiliency and scalability for public safety's needs. All apps that meet either the listed or certified criteria are approved through an applications approval board that consists of members of both the FirstNet authority and AT&T. And as you can see from this graphic that highlights the wide diversity of solutions currently in the catalog.

Talking about devices briefly, FirstNet's legislation called for the list of devices certified for use on the FirstNet network to be maintained by our partners at NIST. The list continues to grow. We're now at a total of 79 devices in the list, and that is publicly available on the NIST website. The goal of reaching the rich and diverse portfolio as requested by public safety is becoming a reality. And it includes the most popular smartphones, as well as some specialized devices for public safety.

We're seeing a wide diversity of other device types also critical to public safety's mission now being included. Those include in-vehicle routers, tablets, rugged handhelds, rugged laptops, hot spots, and other versions of modems. And just as importantly, devices that are Band 14 capable are ramping up as can be seen in the recent user device announcement from major vendors. At this time, the majority of the devices in the portfolio now support Band 14, over 50 percent of the devices listed.

Touch briefly on network status through January of 2019. There are more than 5,250 public safety agencies subscribing and using FirstNet, with over 425,000 connections. This is a 100 percent increase in adoption just in the last six months. And this month will also mark the first year of the official radio access network Band 14 buildout. We just signed that task order a year ago this month. We're extremely pleased with the progress AT&T is making. And, in fact, they've delivered their first milestone for the buildout six months early, and they continue to accelerate this build across the country.

AT&T has stated that they've achieved 40 percent of the buildout in 2018, and they've added more than 50,000 square miles of coverage nationwide. They've stated they will reach 60 percent of the buildout by the end of 2019. So Mr. Chairman, that's a tremendous increase in acceleration of the build for public safety's spectrum. And again, that's delivering on those unique 56-state plans that we and AT&T work closely with in developing that are unique and dedicated to the respective needs of that state or territory. And focused on those public safety responders in the state. And again, that direct voice and input of public safety is reflected in everything we do, especially as it relates to coverage of public safety's dedicated broadband network and into the growth over the next 25 years. Overall, more than 1,000 new build cell sites and towers are planned for FirstNet nationwide through 2023. Recently, we joined AT&T to announce the launch of a new FirstNet site in the Baltimore, Maryland area.

During our consultations with the states and territories, we spent considerable time learning about rural, remote, and in some states, wilderness coverage needs. As Dr. Darsey again mentioned earlier, here in Mississippi, more than half of the state lives outside of urban areas. There's still much work to do but we are doing what we said we would do by mandating in our contract a focus on rural deployment in all phases of the FirstNet network. It wasn't left to the end to try and catch up with the urban areas.

Again, focused on what public safety needs, I'm pleased to provide this report to you, Mr. Chairman. I'll take any questions, should you or the Board members have any.

Edward Horowitz: If I can just comment, or maybe ask a question. So today, we have 79 devices that have been certified. What was the count a year ago?

Jeff Bratcher: A year ago, March of last year, ten? Maybe ten.

Edward Horowitz: Less than a dozen.

Jeff Bratcher: Less than a dozen. Absolutely.

Edward Horowitz: So the rate of growth of devices that are going through the certification process continues that have Band 14 in them, and they're doing that because the people that are manufacturing the devices see a market not only in the first responder community but in expanding in to Band 14 for all purposes.

Jeff Bratcher: Absolutely. And in addition, AT&T drove that requirement into their suppliers that create devices for the FirstNet and commercial AT&T network. So that economy of scale is really driving that for all the vendors.

Edward Horowitz: Do you see -- I'm sorry.

Richard Stanek: Mr. Chair?

Edward Horowitz: Yes.

Richard Stanek: Jeff, real quick, so if one in 25,000 connections, it could be one individual with an iPad, an iPhone -

Jeff Bratcher: Absolutely. We count these service connections using FirstNet service as part of that.

Richard Stanek: How many agencies do you think, at the end of the day, would -- are eligible to do this? I mean, 5,000 is a lot, but there are --

Jeff Bratcher: 60,000 different agencies across the United States is the number we always have quoted, and Dave can correct me if I'm wrong, but that's really the -- and when we're talking with other countries, and it's interesting, this comes up, and that - that quantity is overwhelming to a lot of the smaller countries that we've talked to, but it's around 60,000 different public safety agencies across the U.S.

Richard Stanek: And then, Mr. Chair, Jeff, are you in a position to talk about federal agencies, federal law enforcement agencies in the country in terms of how are they moving forward with their adoption of this?

Jeff Bratcher: Yeah. Absolutely. They are, for the law enforcement, fire - federal fire and federal law enforcement - are all, you know, able to subscribe to the network. I think different agencies have different procurement challenges for their specific agency, but we have adoption of federal users as well on the network subscribing to the FirstNet service. Dave, do you want to add any - any flavor to that?

Dave Buchanan: Yeah. We've -- I think the team has done a great job of outreach to the federal partners. The ATF is one of the largest customers, not just federally, but of all the customers that are on the network, and

so I think that that will continue to be an area of focus, and we've made good progress there.

Richard Stanek: Okay, thank you.

Jeff Bratcher: Great question.

Edward Horowitz: Thank you. I just was going to ask about the application, the listing, and then the certification. Do you see that the number of apps being considered increasing? Is it kind of a steady, you know, a monthly flow, or --

Jeff Bratcher: Definitely on the uptake, I would say increasing now as more awareness of the developer portal and the capabilities we have now for that community, the leverage, the APIs and SDKs for the network, those are trending increasingly upward.

Edward Horowitz: Okay. Thank you. I think we're running a marathon. We're not running a sprint here, and I think that's the thing people have to bear in mind. And just think about two years ago where we were, the gun just went off, and the thing just started, and here we are sitting with this number of connections and this number of agencies, these number of devices that are on, and we've got coverage and everybody says well, okay, are we done yet? And so I think that it's really important to understand that everything we are doing, whether it's crafting a roadmap that's gathering the information, or working to communicate to the world at large as to what FirstNet is all about is going to take time, and it's a steady pace, and we are applying steady pressure.

I also want to acknowledge the - the job you're doing with the 3GPP - the standard-setting body. You kind of have to be in the room when the decisions are made --

Jeff Bratcher: Absolutely.

Edward Horowitz: ... otherwise you're not going to get what you want. And because it's a world forum, it does take -- it's not just FirstNet showing up. You do have to get, if you call, willing allies and people in the room who want to support this. So I want to applaud the work that you're doing, and every one of these working groups inside the 3GPP takes negotiation to a high art is what I've found in standard settings organizations.

Jeff Bratcher: That is absolutely correct. And all of that goes to our dedicated team that has a wealth of experience in this from the private sector, and they are there on behalf of public safety and fighting for those needs, and hats off to that team. They are - they spend most of their time on a plane back and forth all over the world for these meetings, and their dedication is above --

Edward Horowitz: Yeah, it can -- if you look at their travel itineraries, say wow, they're going to this place in the world? They must be lucky. Except when you get there, it's like going into, you know -- you go into a room, and you don't come out of the room.

Jeff Bratcher: Absolutely. These are 14, 15-hour days, for sure.

Edward Horowitz: Yeah, so anyway, really do appreciate the update. Are there any comments or questions for Dave or for Jeff from anyone? Okay. Thank you. Tip, you're up next.

Tip Osterthaler: Thank you, Mr. Chairman. Congratulations, Jeff, to you and your team, and to Rich and to the AT&T contractor. I've been around rollouts of big networks both on the federal side and the private sector side for many, many years. I can't think of any other examples, frankly, anything on this scope and scale that's been done on time or ahead of schedule, and on the cost profile, and is actually performing as it was supposed to. So that's a testament to you and your team and everybody in FirstNet.

Jeff Bratcher: I'm glad you're on the Board for this one. This is a fantastic accomplishment.

Tip Osterthaler: So now we're going to talk a little bit about the -- the deliberations of the --the Finance Committee of the Board, not one of the most exciting parts of a board meeting typically, but it's an essential part of the governance function that boards need to undertake.

The -- what we're going to do today is hear an update from the CFO, Kim Farrington, I'll turn it to her in a moment, and then we'll come back and I'll have some governance details in terms of resolutions and so forth that we'll need to deal with afterwards. It won't take long, but I'll turn it over first to Kim Farrington.

Kim Farrington: Thank you, Chairman. Good morning, everyone. I want to begin by just giving you an overview, again, of our fiscal year 2019 budget. As you can see, we actually have this year's budget categorized in to three different categories. The first being our

operations budget of 81 million dollars. The second category being our reinvestment category of 78 million, and that comprises the funding that we're setting aside for reinvestment back into the Nationwide Public Safety Broadband Network, or the NPSBN. The last category is our reserve. Those are funds set aside for contingencies, and that category is funded at 81 million dollars for fiscal year '19.

What I want to do next is focus specifically on the first category, our operations budget, and give you our cumulative results for fiscal year 2019 to date. So far to date, as of February 28th, we've actually obligated 24.4 million of our total operations obligations budget of 81 million. This equates to about 30 percent utilization of our total obligations budget. On the expense side, looking at the orange bar, that's our expenses cumulative to date through February, totaling 19.7 million of our total 76.5 million dollar expense budget for fiscal year '19. This puts us at about 26 percent utilization of our expense budget to date.

If you straight line both our obligations and expenses for the fiscal year, it comes out to about 33 percent and 32 percent respectively through February 28th. So we feel we are in a very good financial position so far as we enter into the second half of fiscal year '19 soon.

Next what I want to do is focus on that second category that I showed you earlier, our reinvestment fund. And basically, what I want to do is give you an overview of our investment principles that we are proposing to the Finance Committee and the Board this morning. Under Finance Committee Resolution 21 and Board Resolution 98, we are proposing that our investments, as we begin to utilize that investment fund, that first our investments be derived from and benefit public safety, as Dave Buchanan and Jeff Bratcher alluded to; they're doing a lot of work with public safety to capture those priorities of our stakeholders. So we want to make sure that our investments are informed by our public safety community and that we're capturing their priorities and their inputs to improve the network.

Our investments must also maintain and advance the foundation of the network. This means that we want to make sure that every dollar spent is used to innovate and grow the network, and make sure that we improve the network and endure no degradation of services.

Our investments must also consider a balanced approach and provide value to public safety. Basically, what we want to make sure we do is capture all the diverse views and needs of all of our stakeholders and make sure that we use the appropriate resources to ensure that we address these needs, but yet provide flexibility for future investments as well.

And lastly, we want to be fiscally responsible and reflect strong financial management, and we feel like we have that strong financial management with what we've got today and how we're doing with regard to our financial management policies and procedures. We want to make sure that all of our investments provide that value-add as we -- as every dollar we spend on investments is not only focusing on current investments, but also those future investments and utilizing industry as well as other government entities to leverage what they're doing and make the best of our dollars spent.

So if there are no questions, I will be glad to take any, but if there aren't any, I will then turn it back over to our Finance Chair to continue with the governance of these Finance Committee Resolution Number 21 and Board Resolution Number 98.

Tip Osterthaler:

Thank you very much, Kim. Before we actually go through the process of adopting the resolution or of proposing the resolution for adoption by the Finance Committee, the Board -- first I'd like to sort of acknowledge that this idea of a set of principles was proposed and advanced, at least initially, by a number of our federal Board members, and I'd like to thank them for doing that and invite any of them to make any further comments they want to make before we adopt these. But in particular, the Office of Management and Budget was active in helping us to craft these, and Ron Hewitt from DHS, as well as review and participation by the Department of Justice, so the purpose of these is to inform and guide investment decision making. I wish I would have thought of the need to do this on my own, but I didn't. It's a great addition, though, I think to the governance process. So I appreciate those inputs. And would invite any of those federal members who may want to make comments to do so.

Ron Hewitt:

Thanks, Chairman, and with that, Dana Wade is the member on the federal -- the federal member on your committee, and unfortunately, because of the communications, is unable to speak today, but I just wanted to let you know all the other Board members, that she worked very closely with the other two federal

Board members, myself and Chris Piehota from Justice, to bring these together, and we felt very strongly and unanimously that it's important that, just like we have the road map which says how we're going to be looking at the one aspect of the investments, we have to look at it holistically to ensure that, you know, that we have enduring principles that meet the fiduciary responsibilities of FirstNet. And that's what this lays out, the complete -- we wanted to be transparent with everyone external to FirstNet, too, to understand that in addition to meeting the needs of public safety, we also have to meet the needs of the fiduciary responsibilities of this program, and this lays that out for everyone to see, and to be able to use on how investments are going to be made.

Tip Osterthaler:

Additional comments? Thank you. With that, then, I think for the formalities of adopting a resolution, I'll turn it over to the Board Secretary. Karen?

Karen Miller-Kuwana:

Thank you, Chairman. Yes. I just would like to read the operative language. Our CFO had done a wonderful job of summarizing these principles. The resolution both for the Finance Committee and the Board do have the principles in their entirety attached as Exhibit A. I will not read them. I don't think anyone would enjoy that. It's an entire page, but they will be posted to our website once I return to the office tomorrow with the signed resolution. So with that said, I will read the operative language.

“Now, therefore be it resolved that the Finance Committee approves and recommends that the Board adopts the investment principles as presented to the Board by the FirstNet Authority senior leadership, a copy of which is attached hereto as Exhibit A. Be it further resolved that the Finance Committee recommends that the Board authorizes the FirstNet Authority to use the investment principles to guide the FirstNet Authority's investment decisions.” With that, if we would like to call a vote with the Finance Committee members of the Committee alone vote on this resolution.

Tip Osterthaler:

So first may I hear a motion from a member of the Finance Committee?

Brian Crawford:

So moved.

Tip Osterthaler:

And a second?

Paul Patrick:

Second.

Tip Osterthaler: Thank you, Brian. And thank you, Paul. All in favor within the Finance Committee, aye, please.

[CHORUS OF AYES – FINANCE COMMITTEE]

Tip Osterthaler: Are there any nays? Are there any abstentions?

Karen Miller-Kuwana: I'd also like to record that Dana Wade has voted in the affirmative, although she does have communication issues with calling in.

Tip Osterthaler: Okay. So we have 100 percent ayes. Thank you very much, Karen.

Karen Miller-Kuwana: And I will post that to the website, the motion passes.

Tip Osterthaler: And you are going to make this available to the public as you post. Thank you very much. And at this point I think we turn it back over to the Chairman for consideration by the entire Board.

Dana Wade: Aye.

Edward Horowitz: Oh, great. Thank you.

Karen Miller-Kuwana: Perfect timing.

Edward Horowitz: Got that delay. Thanks, Dana. I would just like to add to this that this -- these principles and that Attachment A were thoroughly vetted and discussed within the Finance Committee, and then also subsequently by the Board. So there was a lot of work that went into it, as Tip mentioned. We do appreciate kind of the leaning forward by our federal Board members in particular, OMB, in putting this together, and so it does, you know, lay out the fact that we want to use this as a transparent, repeatable set of principles that assure that public safety is the key beneficiary of the investment. So I want to thank you for the work that you've done, and the vetting that you did on this, and then the presentation to the Board.

So I'd like to, at this point, open the floor to the Board members if there are any comments on these investment principles. Thoughts? Here and now, we should be prepared to vote on Board Resolution 98. So Karen?

Karen Miller-Kuwana: Yes. And as I said, the language is identical almost, but I'll read it again. "Now therefore be it resolved that the FirstNet Authority

Board, having reviewed the FirstNet Authority of principles hereby adopts the investment principles as presented by the Board - to the Board by the FirstNet Authority senior leadership. A copy of which is attached as Exhibit A and be it further resolved that the Board authorizes the FirstNet Authority to use the investment principles to guide the FirstNet Authority's investment decisions.”

Edward Horowitz: Thank you. Are there any comments? Can I have a motion to approve Board Resolution 98?

Teri Takai: So moved.

Richard Stanek: Second.

Edward Horowitz: Thank you Chief. All in favor, please say aye.

[CHROUS OF AYES]

Edward Horowitz: Opposed, indicate by saying nay. Any abstentions? So Madam Secretary, please post the resolution following the Board meeting, or when you get home, whichever comes last.

Karen Miller-Kuwana: And I'll also add for the same communication difficulties that Commissioner Richard Ross and Dana Wade, as Board members, have indicated, as well as Christopher Piehota, that they would like to vote in the affirmative on the resolution.

Edward Horowitz: Thank you, Karen, and thank you, Board members.

Dana Wade: Aye.

Edward Horowitz: All right. Thanks, Dana.

Moving on, it's now my pleasure to introduce our second guest speaker, and one of our inaugural FirstNet subscriber spotlights, Andy Geske of the Hattiesburg AAA Ambulance Service. Andy Geske started with the AAA Ambulance Service in 1987 as an EMT basic and became a paramedic in 1989. Remember those years? Very long time ago.

Andy Geske: A little ways back.

Edward Horowitz: I told you, it was a marathon. Andy is presently serving as the Chief Information Technology and Management Officer and managing the communications department of the AAA Ambulance

Service. Along his career, Andy's been an instructor with many certifications required such as: CPR, ACLS, PHTLS and more. He has continued his education with the use of technology within EMS, and on Monday, the FirstNet Board had the opportunity to attend the round table discussion by the Hattiesburg AAA Ambulance Service, and before Andy begins his presentation, I'd like to share a video that we pulled together highlighting the breadth and scale of the AAA operations throughout Mississippi and the importance of broadband communications for rural first responders. So roll the videotape.

[VIDEO]

Edward Horowitz:

Andy?

Andy Geske:

I'd like to say thank you to the FirstNet Board and thank you, Mr. Chairman, for that introduction. We've enjoyed the experiences with FirstNet. We look forward to the growth of FirstNet. As the video illustrates, there are some challenges in rural Mississippi that we've heard about in the last couple days, and talked about, and telemedicine is one of those challenges for the rural area. I do believe that FirstNet is one of those ways to get that down to the nitty gritty, more or less, to that ambulance that's going to be needing that communication back and forth to the medical control. And one of the illustrations that I hope is actually on this chart is one of those incidences that I had related to you on Monday, where we did actually have an ambulance that needed to talk to medical control, and they were in the rural area, and when they were trying to make that communication through our regular LMR system, it didn't function very well. When they were trying to make it through their cell phones, it did not function at all, but we have the Sonim devices as our vendor of choice for our FirstNet, and we were able to talk to our medical control from the middle of the DeSoto National Forest all the way back to the hospital just as clear as we are now. I'm not very clear right now, but anyway... and it functioned very, very well and they were able to make that interaction with the medical control physician, just as they needed. And that's what we're looking for. We're looking for that one-to-one connection, same as I have with my crew members, with that FirstNet device, with that Sonim device as well, being able to talk to them directly and them talk back to our dispatch center directly, or me - either one.

But these are some of the things that AAA has been founded on, and I'll go through that list very quickly. We were the first licensed

ambulance company in the State of Mississippi. We were the first to train paramedics in the state. We were the first to have satellite telemetry. The first to provide air response to Mississippi, the first to lead in the trauma care system for the state, and, of course, you mentioned SMART911, the first to have SMART911, and I will give that little plug here because I told you I like to plug it every time I like to talk. So, SMART 911.com, if you haven't heard of it, I encourage you to go to that website and research it and decide to make that profile. So...

In some of our integration that we're wanting to do with our FirstNet integration is that to expand it into telemedicine, direct medical control, and that of medical transmission as well. The data has to be transmitted from one facility to the next, from our ambulances to our -- back to our facility, and we want FirstNet to be that medium to do that with. I believe it's got the backbone, the encryption, everything that we need that we're looking for. We do have a lot of the devices deployed. We have 70 of those Sonim devices. We have a couple of the modems that we're testing now for that for the data encryption and the transmission as well. We even test them in the helicopters just to determine if they will function for them just as well as they function for our ground crews.

We look forward to it, and I look forward to the future of FirstNet, and on behalf of AAA Ambulance Service, thank you for the work that you're doing as Board members, as the advocates for the public safety. Thank you all very much.

Edward Horowitz: Thank you, Andy. Any comments or thoughts from the Board?

Paul Patrick: Mr. Chair, it was so impressive Monday to learn about AAA Hattiesburg, and to see them and their -- hear them and how they've utilized FirstNet. It's already been successful and useful. And I know it's just a start, and it's great and exciting for the future of your service, and by utilizing FirstNet, I'm certain that you're going to be able to improve the delivery of EMS in Mississippi and in your - Hattiesburg, in your area and you'll continue to be an anchor for EMS. So thank you so much for being such a great early starter and participant of the service. And I think Rich wants to talk about fire.

Welton Chase: I'll help you out, Rich. So I think Dr. Darsey said something that's really innovative. He said that if you don't have innovation, technology is just technology. What, we're watching you do and

what we watched you do this week was innovative, and that really changes how we use technology. And I'll tell you on behalf of the Board, it was just amazing watching you do that. And I think that's truly the power of this network. You know, Mr. Chairman, with 72 more days to the Atlantic hurricane season, I think we ought to look at how we capture that innovation and record it as the use of the technology that we're deploying. I think that's something that we can tell the story on that really is truly saving lives. And I thank you, Andy, for what you and your team are doing. You've helped us understand this network in the way that we couldn't before you arrived. So thank you.

Andy Geske: Well, again, thank you all very much. We do have a lot of growth to do, and I've got a lot more ideas...

[AUDIENCE CHUCKLES]

Andy Geske ... so as long as we can get it into the hands of that first responder, that's the key. And that's our goal. So thank you all again very much for your work. Thank you.

Edward Horowitz: Well, thank you, Andy. Any other comments or thoughts? Thank you. I'd like to, at this point, open up the meeting for a final update. Because of the communications issues that we're having, Todd Early was planning on calling in, is not able to, but Dave Buchanan, who is FirstNet's Executive Director for Public Safety Advocacy, as you know, is going to run through the presentation. Thank you.

Dave Buchanan: Thanks, Mr. Chairman. I can be brief today. I want to just a quick update on what we've been doing with the PSAC and what we're going to be doing between now and the next Board meeting. As you know, we've got a great partnership with the PSAC. The PSAC organizations and the members that make up the 43 individuals represent the professional associations and organizations from across public safety. Todd Early is the Chair and he's done a terrific job and we've got a great relationship, again, with him and the entire PSAC.

In January, we started our 2019 webinar series with a webinar for the PSAC members, the 43 members, on mission-critical video. We're able to really pilot test the online data capture software that I described in my previous presentation with the PSAC. Got great feedback and dialogue, and, again, quantitative data about mission-critical video and its use in public safety agencies. We continued

with a webinar in February where we talked about the roadmap priorities and we were able to use an additional survey tool to capture priorities from PSAC members about the roadmap, and the – the topics associated with the roadmap.

We're going to continue these webinars through the balance of the year. We have them at the end of each month, and we'll continue to have roadmap conversations in those webinars.

Looking ahead to the next two months, we have our Tribal Working Group, which is our standing working group of representatives from Indian Country and tribal public safety. We'll be using the in-person meeting in April to have a conversation with them about the roadmap to better understand the challenges of tribal public safety in Indian Country, and to have a, again, a robust, in-person dialogue about the roadmap.

And then finally in June, before we get back together for our June Board meeting, we're going to have an in-person meeting of the PSAC two days in Bedminster, New Jersey, the week of June 3<sup>rd</sup>. We're moving from a twice-a-year, one-day meeting to a once-a-year, two-day meeting with the PSAC. And that will be in June. And in that meeting, we'll have, again, in-person validation and prioritization of the roadmap topics from the PSAC members. For us it will be a great opportunity as we're winding into the June meeting where we'll be bringing more roadmap information back to you, Mr. Chairman, and the Board, to get that PSAC touchpoint. We'll also be working with our partners at AT&T and have an opportunity to partner with them and get a tour and give a - provide an opportunity for our PSAC members to get a tour of AT&T's GNOC in Bedminster. So we're, again, delighted with the work we do with the PSAC and looking forward to the next 90 days with these ongoing conversations around the roadmap.

Edward Horowitz:

Any questions or thoughts? I want to say that the webinar series has been extraordinarily helpful. People get together. We've got open - open dialogue between members of PSAC, and the Executive Committee of the PSAC has done a good job at working with the FirstNet staff and coming up with a list of seminars and priorities. Plus, this upcoming meeting at the AT&T Global Network Operations Center should be extraordinarily interesting. It's like being on the inside, which you can imagine being in the Pentagon looking at the world on screens, and that's kind of what this GNOC is, and you see what all of the flow from around the world, throughout the AT&T network is, and right up front, in the

first row, in the right-hand side, is the FirstNet desk. So we are able to monitor what's going on in the active FirstNet network, and that's attached to a help desk also, so when first responders, if they have an issue, or a FirstNet customer has an issue, there's an 800 number that's devoted to them, and their issues are resolved. So I think that will be a terrific couple of days, in addition to the topics, but also getting the tour of the GNOC.

So before we adjourn, let me turn this back over to Ed Parkinson and - for some closing remarks. Thanks.

Ed Parkinson:

Thank you, Mr. Chairman. And really to sum up, as you heard, all the work that the team has been conducting over the last three months, Dave Buchanan's Public Safety Advocacy team, they have the hundred engagements. We've got some members of the team here today - Chuck Murph, it's great to see you here - it's a dedication to public safety that is unparalleled, and it's focused, it's targeted, it's going to be data driven and the information that we gather is going to be put back into our investment plan so that when we do provide the Board with the ideas of future investments, these will be coming from the field. As you see just on this slide, the division to create this dedicated service has to meet public safety's needs and it has to be conducted through a roadmap that is strategic that leads to strategic investments. The work that Jeff Bratcher's team places, especially in the ecosystem with industry, this, too, is going to be a differentiator. They will be able to provide and provide such incredible opportunity, not only to public safety, but for the marketplace to take advantage of what we've been able to create in the public safety broadband space. So I'm excited...we've really hit the point now where the planning has come to an end, and now we're reaching the execution phase. So that over the course of the rest of the year, we're going to be engaging with the community and we're going to be bringing ideas forward, similar to what Andy and the team at AAA can provide and the sort of ingenuity that public safety can show us, with the limited resources that they have, the incredible amount of work that they can provide. And then we're going to bring that forward. So following the June Board meeting later this year, we're looking obviously to bringing investments ideas towards the Board. So I'm excited. I know the team is fired up, and we think that the spring and summertime is going to be an invaluable phase of the project.

So with that, I'd obviously like to thank our gracious hosts down here in Mississippi. Governor Bryant and his team couldn't have been more hospitable. Mayor Hewes, it's been a privilege to come

down to your neck of the woods and look forward to visiting again sometime this fall. And I know I speak on behalf of the entire staff when I say just how excited we are for the weeks and months to come, especially working closely with our partners at AT&T. Thank you, Mr. Chairman.

Edward Horowitz:

Thank you, Ed. And before I move to adjourn the meeting, can I -- are there any comments from the Board? I'd also like to thank Secretary Ross for coming down and participating last night in the Governor's reception, as well as this morning at the signing of the MOU, and it's just -- you know, he's got a lot of things on his plate, and it's wonderful to have him here. Also, Tom Gillman, who is the Chief Financial Officer of the Department of Commerce has been there, Maggie Mitchell has been here for two days from NTIA, and I think Marsha McGuire -- McBride has left the building already, but we have a tremendous partnership with NTIA. We have it with the Department of Commerce, we have it with each state. We've worked tirelessly to develop a relationship first for education, second for opt-in -- now for operation, and the kind of reception that we get here in Mississippi, I have a feeling if we go to other states will be a similar reception there, too, because of the work that first responder -- FirstNet team has done. And again, I want to thank Mayor Hewes for his hospitality on Sunday evening until today. So with that --

Ed Parkinson:

Sorry Ed. Can I just say one thing? To many of you who don't know, this is obviously the public-facing side of the organization, and it's a privilege to be on this side of the house. I do just want to thank one person on staff who's going to be leaving us shortly, and that's Frank Freeman. He's our outgoing CAO. He's been part of the organization for many, many years and without Frank, there would be no FirstNet. There would be no arrangements. There would be no ability for us to conduct the work that we do. So obviously -- there he is, and, you know, I'd just like to thank him.

[APPLAUSE]

You acknowledge Marsha McBride. We're excited to see her coming over as an executive on the organization, but also very excited that Donna Powell, Frank's Deputy will be temporary acting CAO. But Frank, from all of us in the staff, thank you so much for your service. Obviously before with your military career, but obviously the time that you spent here at FirstNet, it's been a privilege to get to know you and to work alongside you, so thank you so much. Thank you, Mr. Chairman.

Edward Horowitz: Thank you. And by the way, he's not leaving government. He's going to the Bureau of Engraving, so he's -- we're trying to get samples. That's all I can say.

[LAUGHTER]

Edward Horowitz: Anyway, again, my apologies for not acknowledging Frank. Thank you so much. We would have no offices. We would have no trips. We -- he's the first guy that I met from the station. He brought me to the headquarters. So again, appreciate it.

With that, may I have a motion to adjourn this meeting, please?

Richard Stanek: So moved.

Edward Horowitz: Second?

Teri Takai: Second.

Edward Horowitz: Thank you. All in favor say aye.

[CHORUS OF AYES]

Edward Horowitz: Any opposed? Abstentions? Thank you. Meeting is adjourned. Thank you, everybody.