U.S. DEPARTMENT OF COMMERCE

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COMMERCE SPECTRUM MANAGEMENT ADVISORY
COMMITTEE (CSMAC)

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MEETING TO DISCUSS LESSONS LEARNED FROM
WORKING GROUP PROCESS

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FRIDAY

DECEMBER 13, 2013

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The Committee met at the U.S. Department of Commerce, Herbert C. Hoover Building, Room 4830, 1401 Constitution Avenue, N.W., Washington, D.C., at 9:00 a.m., Peter Tenhula, Moderator, presiding.

PRESENT

PETER TENHULA, Moderator

LAWRENCE E. STRICKLING, Assistant Secretary
of Commerce for Communications and
Information

COLIN ALBERTS

LARRY ALDER

BOB ATKINS

BYRON BARKER

STEVE BUENZOW

MICHAEL CALABRESE

MIKE CHARTIER (by phone)

TOM DOMBROWSKY

BRIAN FONTES (by phone)

ALEXANDER GERDENITSCH

H. MARK GIBSON

CHRISS HAMMERSCHMIDT (by phone)

DALE HATFIELD

ROB HAINES

JOHN HUNTER

JEFF MARKS

MARK McHENRY

FRED MOOREFIELD

IVAN NAVARRO

KARL B. NEBBIA

GARY PATRICK

MARK RACEK

DENNIS ROBERSON

GREGORY ROSSTON

SANYOGITA SHAMSUNDER (by phone)

TOM SULLIVAN (by phone)

CAROL SWAN (by phone)

PETE TENERELLI

BRYAN N. TRAMONT (by phone)

MARK UNCAPHER

JENNIFER WARREN

JANET YOUNG

KEN ZDUNEK (by phone)

ALSO PRESENT

BRUCE WASHINGTON, Designated Federal Officer

A G E N D A

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

2   9:07 a.m.

3   MR. TENHULA: Friday the 13th, knock

4   on wood, good luck everybody. Welcome to the

5   meeting to discuss lessons learned from

6   Commerce Spectrum Management Advisory

7   Committee Working Group Process.

8   We're going to go through the

9   agenda in a minute, but I'll just open it up

10   to Assistant Secretary Larry Strickling for a

11   few comments.

12   ASST. SEC. STRICKLING: Well, thank

13   you, Peter. And, again, as always, I want to

14   thank -- start off with a thanks to all of you

15   who participated in the process. It was a very

16   important process that we engaged in last

17   year. We've learned a lot, and the purpose of

18   today's meeting is to find a way to capture

19   that and talk about it in getting some shared

20   understandings, because that wasn't a one-off,

21   what we did on those bands last year.

22   As we continue to focus on

1   Spectrum Sharing, these kinds of conversations

2   are going to have to become kind of the

3   standard way of operating, as opposed to an

4   unusual event such as it was when we started

5   these discussions last year. So, it's in that

6   spirit that we really want to hear from you

7   all today because our challenge now, here, is

8   to figure out a way to regularize, or

9   institutionalize, this process in a way that

10 it can run so much more smoothly the next time

11 out, and the next time, and the next time

12 after that because I think this really is

13 establishing a new way of doing business in

14 terms of figuring out the challenges of

15 reallocating bands in a Shared Spectrum

16 environment.

17   So again, thanks to everyone who

18 submitted written comments, and we really look

19 forward to hearing from the rest of you today

20 as we go through the discussion. So, with

21 that, I think we ought to get on to hearing

22 from you. Peter?

1   MR. TENHULA: And I'm sorry I did

2   not introduce myself. I'm Peter Tenhula. I

3   work here at NTIA, as well.

4   (Laughter.)

5   MR. TENHULA: Well, the folks on

6   the phone just in case, and for the record.

7   I'll be moderating this but before we get

8   going and make introductions, we do have a few

9   people still coming in the building, and I

10   know we have the folks on the phone.

11   Just to reiterate some of the

12   purposes and objectives today that Larry

13   talked about, it's about looking back at the

14   process that we undertook since May of last

15   year when this was -- the working group

16   process was kicked off, and see how we can

17   build upon that experience and take advantage

18   of the lessons learned from that. And, again,

19   institutionalize those, document them, and

20   find the best practices, and the not so good

21   ones and see how we can fix those.

22   Just a few comments about some

1   rules and engagement. Our lawyer did walk in

2   just recently and I do want to remind

3   everybody that this is not a CSMAC meeting,

4   this is not a meeting of the Advisory

5   Committee. We are not looking for the

6   consensus of the group. We're just looking for

7   individual ideas and inputs from all of you

8   here that participated in the working group

9   process, the folks that were on the ground and

10   running, and up and doing the -- involved in

11   the working group, so it's not -- we're not

12   going to be taking any votes or reaching any

13   kind of consensus, but we're just more -- get

14   that kind of thing.

15   So, the way it will work, we'll go

16   through some of the hot topics that are

17   discussed in these issues for discussion. And

18   we may call on folks, especially folks who

19   were chairs or co-chairs of the groups, the

20   CSMAC liaisons that were actively involved,

21   and any other participants that were actively

22   involved, we'd like to hear from you most

1   importantly.

2   As Larry mentioned, we did get

3   some written contributions. The ones that I

4   have are from Janice Obuchowski, T-Mobile,

5   DoD, NASA. Were there other written inputs? I

6   think from our perspective, I think the doors

7   and our ears are always going to be open on

8   this, so any other inputs we'll be happy to

9   receive on the record, off the record, so long

10   as it constructively contributes to improving

11   the process here so that next time we will be

12   able to do this smoothly, faster, better.

13   So, to the extent you want to be

14   recognized around the table, raise your hand

15   and I'll call on you. And those on the phone,

16   I guess you're just going to have to chime in

17   on the particular topic. As we get to the

18   point in a topic or an issue where the dead

19   horse is being beaten back to life, we'll try

20   to change topics.

21   So, some of the issues for

22   discussion that were outlined in the agenda

1   are basically kind of a recap, what happened,

2   you know. Basically, it started with the

3   framework document that NTIA developed and put

4   out there to kind of outline what the

5   expectations were for the working groups, and

6   then, basically, when the dance -- when the

7   music started, the dance started happening,

8   the industry folks got together with

9   government folks, probably the first time in

10   a long time, if not ever, to talk about some

11   very hairy technical issues. There is

12   participant selection involved in coming up

13   with the groups, the leadership issues, work

14   management issues, the process and

15   organization, subgroups were formed.

16   Obviously, a big issue that I'm

17   sure is going to take a lot of our time today

18   is information access and information

19   management. A lot of folks in the written

20   comments made constructive suggestions along

21   those lines. The Working Group Report

22   production, and the process for reporting to

1   the full CSMAC. And, hopefully, at the end

2   we'll have time to kind of recap kind of core

3   lessons learned about what works, what were

4   kind of the best practices and ideas for

5   improvement.

6   I also want to just add for

7   context, I think we do have folks here that

8   are involved in other, similar groups. They're

9   international in scope like at the ITU,

10   standards organizations. Dale's been leading

11   the DTAG effort, other multi-stakeholder, even

12   though it's not quite as big as a type of

13   multi-stakeholder, but it -- where lessons

14   learned from those -- best practices from

15   those experiences that you may have -- you may

16   personally have would also be, I think,

17   constructive. So, that would -- also be open

18   for bringing those into the discussion.

19   So, with that I'm going to start

20   kind of high level with some introductions, so

21   just to go around the table. If everybody

22   introduced themselves, obviously, their name

1   and their affiliation, and what working group

2   or working groups you were involved with. And

3   one suggestion, one key suggestion that you

4   think is -- or maybe an issue that I didn't

5   cover that we should cover on the agenda. So,

6   we'll start here in the room and I'll go ahead

7   and start with Karl. He ran the whole show

8   during the process, and I'll start with him

9   making introductions, and we'll go around this

10   way, and then we'll hit the phone.

11   MR. NEBBIA: Okay. I'm Karl Nebbia,

12   the AA and also Spectrum Management, and

13   that's it.

14   ASST. SEC. STRICKLING: AA being

15   All American?

16   MR. NEBBIA: All American.

17   (Laughter.)

18   MR. TENHULA: And another

19   housekeeping, just try to speak into the

20   microphone so we can record it for the webcast

21   and the minutes.

22   So, Karl, just briefly before we

1   move on your role, basically, in kind of the

2   management aspect of this. We did have a

3   series of meetings and calls with the co-

4   chairs and the liaisons. Is that -- was that

5   something that was part of the process

6   initially, or is that something that we

7   definitely needed -- we figured out early that

8   was something that needs to happen, and how

9   did that work out?

10   MR. NEBBIA: Certainly, the calls

11   with the group of co-chairs, I think started

12   pretty early in the process. I think there was

13   always -- it was always helpful to touch base.

14   It wasn't always that easy to see into what

15   was actually happening within the working

16   groups, but we were getting -- we were

17   consistently getting updates at least from one

18   of the co-chairs along the way. But of course,

19   the management structure, everything that we

20   put together here was done kind of on a first-

21   time basis.

22   The closest thing we had seen

1   along this line was work was done under the

2   State Department's ITAC-R groups where

3   actually we had brought together government

4   and industry in the past on the five gigahertz

5   wifi work where there was a lot of sharing of

6   ideas. And, of course, our challenge is being

7   able to formulate consensus recommendations

8   through a process that we saw needed to be

9   interactive.

10   We can, of course, create

11   consensus recommendations by asking you to

12   submit papers to us. You know, we can do an

13   open solicitation of input. We can have a

14   large meeting where everybody gets to talk to

15   us, but to actually create an environment

16   where industry and government get to talk

17   together, negotiate together, share

18   information together, and then provide us

19   consensus recommendations, we have to have

20   some structure that allows us to do that. And

21   that's why we began with this idea of linking

22   it to CSMAC because ultimately, to get the

1   consensus recommendation, it had to come from

2   a body like CSMAC. It just couldn't come

3   through random groups of people meeting

4   together and offering consensus

5   recommendations. So, that's how we kind of

6   started.

7   MR. TENHULA: Okay, and we'll

8   continue on with introductions around the

9   table.

10   MR. MOOREFIELD: Fred Moorefield,

11   DoD. I had the honor of being the co-chair of

12   Working Group Five for a while, and gladly

13   turn that over to Colonel Reese. But,

14   ultimately, I'm moving on to be the kind of

15   overseer for all DoD for its pilot working

16   groups.

17   MR. HUNTER: Hi, John Hunter, T-

18   Mobile. I had the pleasure of working with

19   Fred as the NTIA liaison, and I think that,

20   you know, as you pointed out, Karl, this was

21   a first-ever event. I think it produced a lot

22   of positive outcomes. I think the level of

1   collaboration, notwithstanding the information

2   exchange challenges, in all I think turned out

3   in a very favorable light. So I think we

4   learned a lot through the process, and I'm

5   happy to help figure out where we can improve

6   it moving forward.

7   MR. ALDER: I'm Larry Alder, and I

8   actually was not participating on these

9   working groups, so I'm here to collect the

10   lessons learned. But I do serve on the CSMAC

11   where we're looking at one of the topics right

12   now, is how to deal with sensitive and

13   classified information in a database context,

14   so I'm anxious to learn what lessons there

15   are.

16   MR. ATKINS: Bob Atkins, Aerospace

17   Corporation. I've been a member of both

18   Working Group One and Working Group Three. And

19   again, I also want to echo that the ability to

20   interchange between the various bodies has

21   really helped in the technical side for being

22   able to get information back and forth. It was

1   excellent.

2   MR. NAVARRO: Good morning. Ivan

3   Navarro, NOAA National Weather Service. I was

4   the government co-chair for Working Group One,

5   and it was, indeed, a very challenging and

6   rewarding experience working on the work --

7   doing the working group work. And liked it so

8   much, we're still going.

9   (Laughter.)

10   MR. TENHULA: Mark?

11   MR. RACEK: Okay, can you hear me?

12   I'm not sure what mic to talk into here. But

13   anyway, it's Mark Racek with Ericsson, co-

14   chair for Working Group Two. And I agree with

15   everyone else on all the comments that have

16   been made up until this point as far as the

17   constructive aspects of the sort of industry

18   working with the federal agencies themselves.

19   I think that's a very good model for going

20   forward. I think it's absolutely necessary to

21   be able to have that sort of transaction of

22   information back and forth.

1   I think, though, that the process

2 actually started earlier than the framework.

3 I think it actually went back to sort of the

4 Fast Track studies, because if you took a look

5 at sort of what was provided by NTIA to the

6 federal agencies as far as their -- the study

7 items that they were given as far as the cost

8 analysis, as far as identifying alternative

9 bands, that sort of thing, that's what we were

10 held to. And there seemed to be maybe a little

11 bit of inconsistency in the scope of what was

12 given to us as working group chairs, and what

13 was given them as the scope of their study.

14 So, you know, I think that that's something

15 that could definitely be worked on in the

16 future. Thank you.

17   MR. MARKS: Well, I have scoping

18 here. I think we might agree. My name is Jeff

19 Marks. I'm with Alcatel-Lucent. I did fairly

20 little participation directly in the working

21 groups, but rallied our troops as Steve Wilkus

22 and Marlene Boudicca, who contributed to all

1   five of the working groups. I watched and got

2   reports from them.

3   And, again, I guess similar to -

4   you know, I agree with everything that others

5   have said, and I think that much is covered

6   here, but I do think that as part of our

7   discussion, scoping is important. And, in

8   particular, something that was a bit awkward

9   was the differing views on compressing the

10   band 1755 to 1780, and how sort of at the very

11   end I think it was a happy agreement that came

12   out where DoD is now moving out of those first

13   25 megahertz, but it did -- I think it also is

14   a bit awkward in how it dovetailed with the

15   findings of the CSMAC.

16   MR. UNCAPHER: Mark Uncapher from

17   Telecommunications Industry Association.

18   Somewhat like Jeff, I was -- well, I was not

19   a participant but somewhat like Jeff, I was

20   lurking, trying to keep track of what was

21   going on and following the progress that was

22   taking place. And I would echo many of the

1   comments that both Jeff and Mark have made.

2   MS. YOUNG: Hello. My name is Janet

3   Young with the FCC Wireless Bureau. I worked

4   mostly with Working Group One and Working

5   Group Five. I would like to comment on the

6   technical committee that kind of evolved out

7   of Working Group One, with the co-chairs Ivan

8   Navarro and Steve Sharkey, was very beneficial

9   to have one group looking at those key

10   technical issues that were common to all

11   groups to try to help build a consensus.

12   MR. TENERELLI: My name is Pete

13   Tenerelli, ICF International. I've also not

14   been a participant in CSMAC, but just

15   observing and keeping track of what's going

16   on.

17   MR. TENHULA: All right, Dennis?

18   MR. ROBERSON: Dennis Roberson from

19   Illinois Institute of Technology, and I am a

20   CSMAC member, and the liaison for Working

21   Group One, and had dabbled in actually all the

22   rest of the working groups.

1   MR. HATFIELD: I'm Dale Hatfield

2   from the University of Colorado. I did not

3   actively participate either. As mentioned, I

4   did for quite some time chair the Broadband

5   Internet Technical Advisory Group. I think

6   some of the lessons we learned there may be

7   useful, and I thought Dennis was going to say

8   it, but we also on the TAC, the Technical

9   Advisory Committee over at the FCC, we're

10   struggling with some of the same issues in

11   looking at the most effective way moving

12   forward in terms of getting public input and

13   so forth through the advisory process, or

14   through various forms and multi-stakeholder

15   groups. Dennis, did I butcher that?

16   MR. ROBERSON: No.

17   MR. DOMBROWSKY: Hi, I'm Tom

18   Dombrowsky of Wiley Rein. I'm a CSMAC member.

19   I actually had the fortune or misfortune of

20   participating in all five different working

21   groups. I was the liaison for Working Group

22   Two, and the one thing I would note is that

1   the striking differences between the working

2   groups, I found, were where there was some

3   ability to get technical data and run studies

4   on the industry side, we moved along a lot

5   faster, not surprisingly. So, I think

6   everybody has come out of this understanding

7   that information-sharing is a big issue. And,

8   for example, Working Group Three, we were able

9   to get a lot of the sort of satellite

10   information and the process went along very

11   well on the technical issues; whereas, in

12   Working Group Four and Five, it was a struggle

13   to get any kind of information. So, just my

14   observation at a high level.

15   MR. GIBSON: My name is Mark

16   Gibson, and I'm a CSMAC member, as well. And

17   I was on Two, and I was the liaison for Four,

18   and I was on Five, more active than I had

19   anticipated, but we all were. And, you know,

20   on the one hand I'd like to say that this

21   whole CSMAC effort, while there are lots of

22   lessons learned, you might call them

1   complaints.

2   (Laughter.)

3   MR. GIBSON: It was a good process,

4   and recognizing that it had never been done

5   before, I think that the results of that are

6   well worth the effort.

7   Now, I'll agree with Mark Racek

8   that the -- I think for our working groups, it

9   was almost like a millstone around our necks,

10   was the Fast Track report, because on the one

11   hand the government was using that to say here

12   is what we're working on, and on the other

13   hand the carrier environment was saying yes,

14   but that's not really accurate or right. So,

15   the trouble is that that Fast Track report was

16   sort of begun in a bit of a vacuum, and then

17   when it got to the CSMAC work, you know, most

18   of us, or a lot of us are engineers, we're

19   like well, we're going to fix this. And I

20   think it's to DoD's credit the amount of

21   effort they put into -- I know from Working

22   Group Four, and probably Five, as well, and

1 others working with us to refine that analysis

2 and coming up with a better effort. So, I'm

3 not sure what the lesson learned out of that

4 is. Maybe that when we get this the next time,

5 God forbid if there is one -

6   (Laughter.)

7   MR. GIBSON: -- that we have a

8 little more latitude on analysis procedures

9 and methodologies.

10   MS. WARREN: Jennifer Warren,

11 Lockheed Martin, member of CSMAC, liaison to

12 Working Group Five, and a dabbler in some of

13 the others.

14   First of all, I agree with

15 everything that Mark's last comment -- not the

16 God forbid, but everything else. I do think it

17 was a really worthwhile exercise, painful at

18 times as it might have been, and I am going to

19 take the opportunity to comment, provide a

20 couple of comments even though I fully support

21 how it overall went.

22   I think the definition up-front of

1   what the agency and industry, a written

2   definition of what the task is is really

3   important. I think you've heard different

4   versions. You know, the agencies relied on the

5   Fast Track, the carriers wanted something

6   else. We spent a lot of time constantly

7   revisiting that, and that also created, I

8   think -- it was a diversion, each for their

9   own reasons but, I mean, it was a diversion,

10   but it also created some less-than-positive

11   exchanges that aren't as good for the

12   environment to reach the conclusions we

13   ultimately were able to reach.

14   And I think the process itself was

15   a mix of formality and informality. Formality

16   in the structure in that we were under CSMAC

17   and that, but informality in terms of

18   benchmarking where meetings ended, you know,

19   what were the agreements reached, what was the

20   progress reached in that meeting, where do we

21   start from in the next working group meeting,

22   you know, from week to week, or month to

1   month, or what have you. And I think a little

2   bit more capturing because there was not

3   consistent attendance. There was some from

4   some of the very technical folks, but a lot of

5   the others would come in and out as schedules

6   permitted because there's a very intense

7   period of meeting, so I think -- and that's an

8   experience from the ITU. There's a lot of

9   documentation not like being held to it, but

10   that you know where you ended, and so where

11   you're starting again when everybody comes

12   together. It allows people to come in and out

13   without having to revisit things which, again,

14   creates, I think, a better environment for

15   working. So, I'll just stop there for now.

16   MR. FONTES: For those sitting

17   around the table, I was admiring closely

18   Jennifer's Diet Dr. Pepper, and I said, where

19   did you find that? She goes in her purse and

20   rips out another -

21   (Laughter.)

22   MS. WARREN: That's why that

1   comment was made.

2   (Laughter.)

3   MR. FONTES: So much appreciated.

4   My name is Brian Fontes, and I co-chaired the

5   CSMAC with Gregg Rosston who will probably be

6   here a little bit later. I know he had another

7   commitment this morning. And throughout this

8   process, there's been a number of

9   opportunities to meet with these gentlemen

10   here at the head of the table to kind of do an

11   assessment as to where we are, what we're

12   doing, where we need to go.

13   What we've tried to do, I think,

14   to some degree with success, is the fact that

15   -- I keep looking, I thought that might have

16   been Greg -- that compared to previous CSMACs

17   where work has been done for an extended

18   amount of time, months on end, to come up with

19   a final report, the final report tended to be

20   extremely lengthy, and watered-down, that's my

21   term, primarily to reach consensus among the

22   folks participating in the group. And you

1   know, I tend to draft documents or think of

2   documents in terms of how the reader will

3   review the information. And in this case, I

4   looked to Larry and others in government as

5   government officials, policymakers, that need

6   to read the document in terms of its policy

7   implication. So, we tried in this CSMAC to do

8   it a little bit differently, to raise

9   questions throughout the whole tenure, to

10   generate responses to those questions.

11   Now, was the process smooth and

12   wonderful and just easy to do? Absolutely not,

13   but I think it's a right direction. And I

14   would hope that the next CSMAC continues in

15   that process, because I think it keeps people

16   engaged. I think you get responses to issues

17   earlier on than at the very end of a CSMAC. I

18   think it also brings out early in the process

19   where there are these difficulties that have

20   been identified by the other commenters

21   sitting around the table, so that actually

22   during the course of the CSMAC, you may be

1   able to attempt to remedy or address some of

2   those difficulties rather than have them

3   identified in the final report, at the end of

4   a lengthy period of time, and then try to

5   figure that out.

6   And so, as much as it may have

7   been challenging, difficult, the struggle,

8   pull-and-push, if you will, of data, who were

9   the right people, how do you deal with

10   classified sensitive information, we're

11   actually talking about it within the very

12   CSMAC in which we're working with it, rather

13   than teeing it up for the next one.

14   And so, for the process part of

15   it, and I want to congratulate the team for

16   accepting that approach and encouraging that

17   approach, quite frankly, in moving this thing

18   along well. And I think as much as we may be

19   frustrated with speed, and frustrated with a

20   number of different things, perhaps they're

21   just sometimes frustrated with a lot of things

22   going on. But at the same time, too, I think

1   there's a positive aspect to that frustration

2   to the extent that it drives us, it pushes us

3   to try to find remedies, and at least to

4   articulate and identify what the root cause of

5   those frustrations are that may, in fact, lead

6   to discussions on possible remedies and

7   solutions.

8   So, those are just some of my

9   observations with respect to the process

10   during this CSMAC. One of the things that I am

11   constantly amazed with is the fact that so

12   many people dedicate enormous amounts of time,

13   talent, energy, and resources to try to

14   achieve something that is not necessarily a

15   company-specific, or an agency-specific

16   benefit, but to the broader good of trying to

17   move U.S. in a better direction, if you will,

18   in terms of spectrum management and spectrum

19   use. So, for all of those folks who really did

20   the length of time down here on the five

21   committees. And Jennifer, you participated in

22   one or two but dabbled in many, I have just

1   been amazed at your dedication and commitment.

2   Thank you.

3   MR. TENHULA: Thank you, Brian.

4   We'll just continue along the wall here just

5   to make sure we get everybody that's here. And

6   feel free to come up to the table if you want

7   to participate, especially if -- you know, I

8   would -- if it's okay with Karl, NTIA's staff

9   that was on the ground and in these working

10   groups to kind of get their impression. So, I

11   think you can just speak up and we'll

12   hopefully capture you.

13   MR. MARTIN: Good morning. My name

14   is Don Martin. I'm an engineer in Alliant

15   Science and Technology, and I was a member of

16   the teams that worked doing the analysis in

17   Groups Four and Five. And a couple of things,

18   one is, if Fred ever calls me saying we'd like

19   you to do this again, I'm going to say no.

20   (Laughter.)

21   MR. MARTIN: The other is, if I'm

22   not smart enough to do that, learn how to take

 1   a beating and say thank you, can I have some

 2   more.

 3   (Laughter.)

 4   MR. TENHULA: And just to

 5   interject, Bob Lyon did offer the portal for

 6   the document-sharing through a SharePoint

 7   site. Is that right?

 8   MR. MARTIN: Yes.

 9   MR. TENHULA: So, maybe we might be

10   able to delve into how well that worked, and

11   those kinds of tools, online collaborative

12   tools to the extent that they facilitated

13   document exchange and review. So, Gary well,

14   just -- we'll highlight that later actually.

15   MR. LYON: The only other thing I

16   would say is that as both Four and Five

17   concluded their work in the timeframe that we

18   had for this, I think it has been stated a

19   number of times that the work really wasn't

20   finished. There needed to be more but it has

21   stopped. But we are bearing down on a date

22   where there'll be an auction, and then the

1   work that needs to have been done to help

2   these communities find a common ground has

3   stopped, and that's not a good thing. Somehow

4   we need to find the means to keep doing it.

5   MR. TENHULA: Thanks, Bob.

6   MR. PATRICK: I'm Gary Patrick with

7   NTIA. I was the Working Group Four liaison

8   with Mark. I think one of the major hindrances

9   that you guys have already said was the

10   information exchange. And as Bob said, I think

11   we were getting there. We just needed more

12   time, and didn't really complete the work, and

13   how that's going to be used is roughed up at

14   this point. So again, Bob did a lot of good

15   work, and I wish we could complete if we had

16   enough time. Thanks.

17   MR. GIFT: I'm John Gift, an

18   attorney with NTIA. I didn't participate in

19   any of the groups, but I'm just here to

20   observe.

21   MR. NEBBIA: So, we do have

22   additional seats at the table -

1   (Laughter.)

2   MR. BARKER: Byron Barker. I was an

3   observer, also. I provided staff support. One

4   thing I just want to make note for the record

5   in reference to the Fast Track report, really

6   what you're referring to is a Feasibility

7   Study, I believe, for 1755 to 1850. The Fast

8   Track report was one of our first reports

9   where we looked at 3500 to 3650, and the 4200

10   band, and -

11   (Simultaneous speaking.)

12   MR. BARKER: So, I just want -- you

13   know, so we don't get it misconstrued there.

14   Thank you.

15   MR. TENHULA: Mary, did you

16   introduce yourself? I know Janice could not be

17   here, but she did make the contributions.

18   MS. RIFCHEN: Mary Rifchen, FTI,

19   supporting Janice Obuchowski, she's traveling.

20   She's on the road right now. And, actually, my

21   colleague, Colin Alberts is more familiar with

22   her statement. You want to -

1   MR. TENHULA: Were you guys

2   involved in the work groups?

3   MR. ALBERTS: I was an observer for

4   just about all of them on behalf of -

5   MR. TENHULA: First, Colin, your

6   name?

7   MR. ALBERTS: Colin Alberts,

8   Technologies. Echoing Mary, I think that we'd

9   like to stand by -- obviously, I'd like to

10   stand by Janice's statement on the lessons

11   learned, but trust-building is an exercise,

12   and this was an interesting one, but I think

13   we came a long, long way. And I think that the

14   resources that this round of CSMAC was able to

15   muster to get to the conclusions that we did

16   was pretty impressive, and I'd like to see

17   that -- I'm hopeful that CSMAC will be able to

18   continue doing that, as much as some other

19   people around this table say never again.

20   (Laughter.)

21   MR. TENHULA: So, Michael came in a

22   little later. Do you want to introduce

1   yourself and where -- we're doing

2   introductions, any involvement in the working

3   groups you had, any one issue that you think

4   we ought to make sure we don't avoid

5   discussing.

6   MR. CALABRESE: Sorry I couldn't be

7   here from the start. Michael Calabrese, CSMAC

8   member. Yes, it was, you know, I thought a

9   very productive process overall despite the

10   frustrations and flaws that some CSMAC members

11   have identified, and I'm sure it'll be better

12   if we do it again in that respect. But the one

13   thing, you know, I did hear that I had on my

14   mind what was Brian suggested about interim

15   reports. I think that's very important,

16   particularly because some of us as members

17   don't have the resources and/or technical

18   expertise to have been as close to this as we

19   would like. And if this is being done within

20   the framework of the CSMAC as a FACA, then I

21   think the actual membership of the CSMAC need

22   to have more of a sense of how it's

1   progressing, and some input at points along

2   the way rather than waiting to the end when

3   you're a skunk in the party if you question

4   anything that's been done. So, I think that

5   might be one area for improvement to discuss.

6   Thank you.

7   MR. TENHULA: And Rob?

8   MR. HAINES: Are these mics working

9   from a distance? Can you hear me?

10   MR. TENHULA: Yes.

11   MR. HAINES: Okay. I'd just like to

12   say that I join the others who said that -

13   MR. TENHULA: Can you just give

14   your name?

15   MR. HAINES: I'm sorry. Rob Haines,

16   NTIA. I was the NTIA point of contact for

17   Working Group Three. As a lot of other people

18   have mentioned, we had a lot of pain in the

19   time when we were trying to get information

20   back and forth between the different groups,

21   but the encouraging part came when we did get

22   information and we started to work as

1   engineers, those of us who were technical

2   within the group, and were able to talk about

3   things that we knew and we shared a lot. We

4   had a lot of common views on engineering,

5   maybe not proper modeling always, but with a

6   lot of the technical issues we found a lot of

7   common ground, so I think that brought us

8   together.

9   MR. TENHULA: Okay. We're going to

10   turn to the phone now. This is going to be

11   fun. With the time that has passed already, we

12   want to just get an idea who's on the phone,

13   so if you would just quickly announce

14   yourselves in order, alphabetical order. So,

15   if you -

16   (Laughter.)

17   MR. TENHULA: Let's go with the

18   folks that are As, Bs, and Cs first. And if

19   you have a last name that is more towards the

20   back of the alphabet, kind of wait for

21   everybody else. Okay? That might work, because

22   I'm not sure how many folks we have on the

1   line, but let's go. If your last name begins

2   with A or up there in the alphabet, start

3   introducing yourselves, please, on the phone.

4   Thank you.

5   MR. BUENZOW: This is Steve Buenzow

6   with the FCC. I'm not A, but I'm in the B

7   category. I was a participant on Working Group

8   Four.

9   MR. CHARTIER: Mike Chartier,

10   Intel. Co-chair, Working Group Four.

11   MR. AMANO: Hasburt Amano with

12   Federated Wireless.

13   MR. TENHULA: All right. Anybody -

14   MR. GERENDITSCH: Alexander

15   Gerdenitsch, Motorola Mobility, and I was one

16   of the co-chairs of Working Group Three.

17   MR. SULLIVAN: This is Tom

18   Sullivan. I'm jumping in under N for NASA,

19   although I believe Kathy Schlesinger, FTI, is

20   present this morning in person, and most

21   qualified to engage in these discussions.

22   MR. TENHULA: Okay. Anybody else

1   want to jump the alphabet?

2   (Simultaneous speaking.)

3   MR. KAHN: Intel and CSMAC and

4   participated in Working Group Five.

5   MR. TENHULA: Repeat that again.

6   MR. KAHN: Kevin Kahn from Intel.

7   MR. TENHULA: Okay, Kevin. Okay.

8   MS. HAMMERSCHMIDT: Chriss

9   Hammerschmidt from NTIA. I was on Working

10   Group Five, and Eric Nelson is also here was

11   Working Group Five, and Jeff Wepman is sitting

12   in on the phone call.

13   MR. TENHULA: Anybody else on the

14   phone?

15   MR. TRAMONT: This is Bryan

16   Tramont, worked with Working Group Five with

17   Jennifer. And I want to take this opportunity

18   since I have the microphone to ever-so-briefly

19   give my two bits. I want to agree very much

20   with Jennifer about defining scope early on.

21   I think that's super important. I also want to

22   emphasize, I think there's a real value in

1   adding timelines associated with tasks so that

2   everyone remains focused on getting things

3   done on a certain schedule. And then the third

4   thing, I think it's similar to what Bryan

5   Fonts had raised, which is that when we

6   identify information gaps or barriers that

7   we're hitting that there's some sort of

8   escalation function.

9   I know there are perils associated

10   with that because you don't want to have

11   people running away from the working groups

12   every five minutes, but I did feel like there

13   were some institutional barriers that were

14   identified, new process that might have

15   benefitted from earlier resolution because I

16   think people saw them coming earlier. I'm not

17   quite sure how to balance that with the need

18   to not have people running to NTIA every five

19   seconds, but I do think that some sort of

20   escalation process when barriers are

21   identified would be useful. Thank you.

22   MR. TENHULA: Thank you.

1   MR. WILKERSON: Steve Wilkerson

2   with Alcatel-Lucent. I'd like to underline a

3   lot of good things that have been said

4   already, particularly my colleague, Jeff

5   Marks, who cited me for having contributed to

6   Alcatel-Lucent's representation on Working

7   Groups One, Three, and Five. That's a bit of

8   joke there. But I think we're seeing some of

9   the early pains of trying to use shareware

10   techniques of having documents posted on

11   websites that kind of come and go, and the

12   best ones get reset and have some difficulty

13   in trying to keep everyone synchronized with

14   the process.

15   I hope that in the future, one of

16   the lessons learned is to have more consistent

17   and more straightforward use of the online

18   sharing websites that include sharing screens,

19   as well as having document repositories, as

20   well as ongoing debates and discussions that

21   can help offload some of the desires to deal

22   with various topics in more depth without

1   feeling steamrolled in the way that a one-hour

2   meeting often requires. So, I know I saw

3   people like Gabriel get knocked down quite

4   often for trying to bring up some of the

5   points he had to make where -- which we did a

6   lot of other discussions, as well, but perhaps

7   they could have worked better offline. But

8   otherwise, the give-and-take and the general

9   progress of open discussion was impressive

10   given the stakes and the detail, technical

11   problems involved. Thank you.

12   MS. SWAN: Carol Swan, Air Force

13   Spectrum Management Office. I participated in

14   all the working groups. Thank you.

15   MR. ZDUNEK: This is Ken Zdunek,

16   Roberson and Associates, and also the Illinois

17   Institute of Technology. I participated in

18   Working Group One, and Working Group Four,

19   technical side primarily. I'm in the

20   transportation group, and just a few quick

21   comments, if I may.

22   I sure do want to commend the

1   Working Group Chairs for their patience in

2   bridging these two worlds, the government side

3   and the industry side. And also the engineers,

4   particularly the ones that did the analysis.

5   This is a version of extreme engineering that

6   was really extraordinary to get these -- some

7   of these analyses and end results done under

8   the watchful eye of a lot of people.

9   I think a tremendous amount of

10 progress was made in bridging understanding

11 between the technology side. Again, technology

12 as well as operational requirements on the

13 government and industry side. And a lot more

14 can be done.

15   I think one area that can

16 facilitate consensus, we said that that's very

17 important, is to have mutually agreed on

18 modeling, you know, modeling approaches and

19 parameters and so forth, and tremendous amount

20 of progress was made, but I think more can be

21 done. And then the very last thing is I think

22 the information exchange going forward will be

1   greatly facilitated by the trusted agent. You

2   know, initially there, I'm surprised no one

3   mentioned that it really came in relatively

4   late in the overall process, but going forward

5   I think that's going to facilitate better

6   understanding and this consensus building.

7   Thanks.

8   MR. TENHULA: Any others on the

9   phone?

10   MR. SHAMSUNDER: This is Sanyogita

11   Shamsunder from Verizon. I was participating

12   mostly in the technical discussion, and also

13   in overall discussion with the Working Group

14   Five, but also with Working Group One, and

15   Working Group Three.

16   MR. HARPIN: Derek Harpin with NSN

17   Nokia Solutions and Networks. A little bit

18   engaged, but my colleague, Prakash Muraud, was

19   Working Group Five, Sub-Working Group Co-Chair

20   of PGMs and other airborne systems, and I

21   don't think Prakash is able to join this

22   morning, but sort of I'm here on his behalf.

1   Thanks.

2   MR. FEE: This is Larry Fee

3   supporting DSO. I supported Working Group Two,

4   and the other general DSO support for the

5   working groups.

6   MR. TENHULA: Okay. For those that

7   may be too shy to introduce themselves on the

8   phone, they just want to listen in, that's

9   fine, too. Otherwise, I think we're going to

10   move on, unless I missed any other Working

11   Group Co-Chairs, liaisons, CSMAC members on

12   the phone that did not chime in yet.

13   MR. WASHINGTON: Peter, for the

14   record, this is Bruce Washington, Designated

15   Federal Official for all of the working groups

16   and CSMAC.

17   MR. TENHULA: Hey, Bruce. Do you

18   have a way of figuring out how many people are

19   on the phone?

20   MR. WASHINGTON: I can do it later,

21   but not now.

22   MR. TENHULA: Okay. All right,

1   thanks. We were wondering where you were.

2   All right. Well, let's just kind

3   of talk -- follow-up. I think there was a lot

4   of excellent points, and I definitely already

5   learned a few things, especially with

6   references to the Fast Track, which we

7   understand our reference is to also the 1755

8   Report that were issued by NTIA.

9   I do want to point out that the

10   process within the CSMAC did start before all

11   of this, and there was the 500 megahertz

12   effort which, you know, Steve Sharkey, even

13   though he wasn't a member of CSMAC led a

14   group, or participated in a group. You know,

15   this is before I got here, but there was some

16   effort that I think did, you know, go into the

17   development of that 1755 Report, especially

18   with regard to the bifurcation of the lower

19   25, you know, knowing about the lower 25

20   preference from an industry perspective, and

21   kind of the two-phased approach I think that

22   was recommended by the CSMAC at one point

1   before this was -- before that, but Karl, is

2   that correct?

3   MR. NEBBIA: I think it was

4   discussed earlier. Obviously, we were of

5   industry's primary interest in the lower

6   portion of the band. We were also aware of the

7   tremendous amount of spectrum that they were

8   looking for, so it was certainly natural for

9   us to look for as much spectrum as where we

10   could get it. And I think in the context of

11   setting up the framework of the discussions,

12   part of the challenge here was -- and this

13   isn't necessarily going to happen in future

14   situations, but we looked at the entire band.

15   I think we were certainly willing to see ideas

16   come forward that said well, we can break off

17   25 megahertz, or we can do this in some sort

18   of phasing process. And, in fact, in our

19   report we did report on portions or activities

20   that could be moved out of the lower 25 in an

21   earlier point, so we saw that as being kind of

22   a phased consideration; but still the overall

1   goal to look at the whole band. And I think

2   when industry came into the discussion they,

3   I think, were hoping that the process would be

4   to start over again, relook at the whole

5   thing, and focus on the 25. And I think that

6   became a challenge, a difference of viewpoint

7   were we going back to starting the whole thing

8   over again, and only going to break off a look

9   at the 25; whereas, the agencies were

10   participating on the basis of the months of

11   discussion that had already gone on from our

12   side as to whether that was a realistic

13   approach.

14   Now, I think our report did allow

15   room for, once again, this phased timing, but

16   it was still oriented toward the idea that we

17   were looking to allow access on the whole 95.

18   One other thing I wanted to

19   mention in setting up the framework for the

20   discussion is we had gotten a lot of input,

21   including through representatives in CSMAC

22   that when they looked at this band, went out

1   and ran their monitors around they saw almost

2   no activity, so that coming into the

3   discussion we saw the possibility across the

4   band of potentially living in an environment

5   where there was intermittent activity, and

6   people were going to be able to find a

7   solution to work together in that kind of

8   intermittent activity.

9   What we still found was a desire

10   to get people completely out of the bottom

11   portion of the band, and not necessarily to

12   rely on that aspect of it. So, I think we were

13   really hoping there was an opportunity in 95

14   to work through. Obviously, we've come out in

15   somewhat of a different place than that, but

16   that's why I think we didn't shut off the

17   discussion to say it was only lower 25, or

18   whatever, and that led to a lot of back and

19   forth on the framework.

20   MR. TENHULA: Okay. So, continuing

21   on the discussion on the framework, I'll --

22   this is really following up on the opening

1   comments about defining kind of the terms of

2   reference, or the charter, basically, for each

3   group, you know, what the marching orders were

4   and how those previous documents which this

5   has affected that, and then also kind of open

6   up, the question is how that -- maybe that

7   framework document, those marching orders may

8   be -- could be revisited and modified along

9   the way. Is that something that would be

10   suggested or not? Do you have a -- Jennifer.

11   MS. WARREN: Thank you. Jennifer

12   Warren for the recording. I wanted to follow

13   up, and I'm taking this as we are here

14   informally to actually really -- I mean,

15   formally, but informally to engage and

16   respond.

17   I think one of the challenges was,

18   again, the conversation that Colin was having

19   was about relocation. That was really, I

20   think, initially part of the report was about

21   relo, and then some of us at least in the

22   CSMAC understood the mandate to be looking at

1   sharing. And I want to be very clear using

2   specific terms, as opposed to kind of blending

3   it. I said that was really a challenge for a

4   long time, and maybe permeated the entire

5   process, was what was -- what were we supposed

6   to be looking at. And that's why the 25

7   megahertz just kept coming in and out.

8   MR. TENHULA: Right.

9   MS. WARREN: And I think that being

10   clear and what, you know, NTIA was looking for

11   would have been very helpful. You know, in

12   hindsight would have been very helpful to have

13   that up front, because we spent a lot of time

14   debating, so going back to the framework, and

15   going back to what the overarching direction

16   is. And it shouldn't vary by working group,

17   because it's all in the same band. So, we need

18   something that's comprehensive for all of the

19   working groups to draw from because, again,

20   it's all in the same band, and not systems

21   that are piecemeal and just in adjacent parts

22   of that band, so that's why I'm worried about

1   an overarching.

2   MR. TENHULA: Right. The

3   alternative is a clean slate. Say you have --

4   start fresh, you forget anything that's gone

5   before, you know. I mean, that would have

6   maybe been a step backwards, but that would

7   have been the alternative.

8   MS. WARREN: Yes.

9   MR. TENHULA: Okay, Tom Dombrowsky.

10   Does anybody else want to talk -- if anybody

11   else wants to talk about the framework

12   document itself and the impact on that raise

13   your hand, and I'll call on you.

14   MR. DOMBROWSKY: Yes, this is Tom

15   Dombrowsky. I think from the industry's

16   perspective, I think the concern on

17   information sharing wasn't limited to

18   technical information, so the reason why there

19   was such a push back on sharing versus

20   relocation from the industry side was we

21   didn't understand what was going to be

22   relocated, not going to be relocated, what we

1   were sharing with, what we weren't sharing

2   with, what the costs that were going --

3   associated with that relocation process. We

4   all felt that we were having these discussions

5   so we could engage on the report, the

6   feasibility report and looking at all the

7   different things in the feasibility report,

8   not just narrowly on sharing. And maybe that's

9   the industry's fault, but I can tell you that

10   the industry perspective going in was we were

11   looking at what happened in the feasibility

12   report, and we were going to take it as a

13   group, sort of agree on the two or three

14   things we should focus in on. And, instead, a

15   lot of folks -- and, again, as I think someone

16   said earlier, we had people coming in and

17   coming out of these things, so we would

18   reargue these things, was a big problem. So,

19   my final thing, which isn't related to this,

20   but sort of add since we're talking about that

21   is having a sort of organized approach of

22   meeting notes and following on type of things

1   so people that aren't at every meeting can go

2   and read and look, and understand.

3   I'll tell you, Working Group

4   Three, just to single out one, did a fantastic

5   job with that. Other groups had a struggle

6   with that.

7   MR. TENHULA: Like Minutes and

8   MR. DOMBROWSKY: Yes, Minutes and

9   sort of

10   MR. TENHULA: -- documentation.

11   MR. DOMBROWSKY: Yes, yes, just

12   basically, so if you're not at -- if you miss

13   a meeting, let's be honest, there were a lot

14   of meetings, if you missed a meeting you could

15   read and be ready for the next meeting, and

16   know where people agreed or didn't agree. And

17   we didn't have to reargue the same things over

18   and over again, which was a lot of frustration

19   for those of us that attended pretty much all

20   of them. You get a new person in and we're

21   like look, we already talked about this three

22   times. Can we not talk about it again?

1   MR. TENHULA: Mark. I'm sorry,

2   Fred.

3   MR. MOOREFIELD: Yes, Fred

4   Moorefield, DoD. So, I kind of echo the two

5   comments made on the framework. Even within

6   DoD I don't think there was agreement as to

7   what we were doing, whether it was were we

8   doing sharing, was it relocation, was it a

9   combination, were we looking at the lower 25,

10   or looking at the whole band. I think some

11   clear documentation with respect to that I

12   think would go a long way to getting there.

13   I understand that there's a time

14   frame here, so I think we need to talk about

15   what that framework should look like,

16   especially as it relates to time. You know, so

17   as an example, if we're going to do a sharing

18   of -- use the band we studied as an example of

19   1755 to 1850, and not presupposing, but it's

20   pretty clear that sharing wasn't feasible. But

21   understanding that we didn't have the time to

22   go back and look at other aspects of that with

1   all of the legislation and everything else

2   going on needs to play into what we're

3   realistically being told to do within that

4   framework. But then to go back, I should have

5   said as some opening comments because I don't

6   want anybody to take away the fact that the

7   magnitude of what NTIA took on to set this

8   group up, you know, and I'll just speak from

9   a DoD perspective. You know, for the first

10   time in history bringing together such a

11   magnitude of people not just the spectrum

12   guys. We had folks coming in from the field

13   and the program offices, the acquisition folks

14   in the Pentagon, all planning this from a

15   resource perspective when this isn't their day

16   job. And dedicating their time for this whole

17   process, and NTIA taking on this huge

18   undertaking, putting all these folks around

19   the table, you know, from these different

20   aspects, you know, took guts from my

21   perspective. And I think at the end of the day

22   it worked pretty well. I think there were some

1   challenges that we talked about, but all in

2   all it worked pretty well.

3   And I look at this kind of as a

4   beginning, you know, what I would say is a

5   change in how we do business, you know, if

6   anything for the country. So, I could go back

7   to one of Karl's points earlier, you know, ITU

8   baseline was a good start, you know, but this

9   was really about the country. You know, what

10   can we do for the country, even if we're going

11   to do something a little different. You know,

12   going back to your comments about the policy

13   aspects of this. You know, we had to keep an

14   eye on the policy aspects of this, because

15   some of the things we were looking at from a

16   technical perspective had international

17   implications that we couldn't ignore. So,

18   there was a couple of different things, we

19   needed to figure out how we balance certain

20   things, if we're doing certain things for the

21   country, with an eye on global policy and

22   things that we're saying in ITU forums and

1 other forums, detail forums that will have

2 implications on what we're saying in these

3 groups, that we may not want to say outside of

4 this country because some of the things we may

5 agree with in the country, may not be

6 applicable in other countries, and the DoD as

7 a global operator is in a difficult position

8 around the world. I have more comments later,

9 but those are the

10 MR. TENHULA: Great, we'll have

11 plenty of other topics. And before I move off

12 the framework document, I think Mark wanted to

13 chime in, anybody else on the framework

14 document.

15 And the next topic we're going to

16 talk about, kind of the process of what

17 happened, you know, based on that. And Fred

18 made a good point about the time frame, that

19 document did anticipate some target

20 deliverable dates which, obviously, ended up

21 being blown out of the water except for maybe

22 one group I think was timely, Working Group

1   One. Working Group Two, obviously, came in

2   really early, too, so that's what our next

3   topic is going to be more process oriented,

4   participant selection, leadership, work

5   management, those issues.

6   And before I turn to Mark Gibson,

7   I just want to for the record note that Mark

8   McHenry from Shared Spectrum came in. You were

9   liaison, Working Group One.

10   MR. McHENRY: Correct.

11   MR. TENHULA: And Greg Rosston Co-

12   Chairs CSMAC, also came in, so we're not going

13   to indicate in the record what time it was.

14   (Laughter.)

15   MR. TENHULA: Mark will have to

16   kind of note on the usefulness of the

17   framework document and ideas were

18   MR. GIBSON: Well, I'll make two

19   comments, and I'll kind of flip around at

20   least the way I initially thought about them.

21   On the framework document, I think I'll echo

22   what everybody else said, which is that it was

1   a good framework document to start with, but

2   it needed to have some flexibility in it, and

3   that was evidenced by the fact in Working

4   Group Four, for example, when the Working

5   Group Four was supposed to be microwave and

6   Tactical Radio Relay, and then at the first

7   meeting we realized that it was also SDR

8   jitters, or software fine radio joint tactical

9   radio systems, and so the microwave TRR aspect

10   of it had one meaning. When you throw the

11   jitters which were classified or if not FOUO

12   and a totally different sharing scenario, it

13   set us back at least three months, because

14   then we had the issues of taxonomy, were we

15   talking about sharing the relocation? The

16   feasibility report did not include anything

17   about them, so we really were left wondering

18   what to do. So, we got good guidance from

19   NTIA, but it required a lot of nibbling, I

20   guess, for lack of a better term. So, I think

21   the lesson learned would be -- I think the

22   fact that the jitters weren't part of it was

1   probably an oversight, so that happens. But I

2   think that -- and we had several meetings on

3   this, that we needed more flexibility in the

4   framework document so -- and we heard this, so

5   that we understood whether we were talking

6   about sharing versus relocation, or sharing

7   and relocation.

8   And what came out of that was this

9   sort of nebulous concept of transitional

10 sharing which we're now working on in this

11 current iteration of the CSMAC, but that kind

12 of got left sort of by the wayside. And had

13 that been a little bit more understood both in

14 the three working groups I was part of, it

15 might have helped better characterize the

16 discussions toward some resolution.

17   MR. TENHULA: Okay. Just before we

18 move on to the next issue, if there's any

19 working group co-chairs on the phone, any

20 CSMAC liaisons that want to chime in on the

21 topic of the framework document, the terms of

22 reference, and kind of the just general idea

1   of clarifying the issue -- the matters for

2   discussion and the work that was expected.

3   Okay. All right.

4   I want to move on to kind of the

5   process, but if

6   (Off microphone comment.)

7   MR. TENHULA: Okay. Dennis

8   MR. ROBERSON: I'll maybe do the

9   crossover. I've been debating where to put

10   this, but as we've had this conversation, --

11   this is Dennis Roberson from Illinois

12   Institute of Technology.

13   A key part of the framework

14   document that maybe was missing was let's do

15   the right thing. It makes it more nebulous,

16   but at the same time gives the flexibility

17   that's needed, because in some cases the

18   framework document was used as a club. You

19   know, we can't do this because the framework

20   document didn't say, even though in the end

21   you determine, and the group determines that

22   the right thing is something slightly

1   different than what was captured in the

2   framework document. But the framework

3   document, no document that any of us has ever

4   produced is perfect. There's always the

5   opportunity to as you learn something to go in

6   a slightly different path. And I think that

7   may be sort of an overarching structure that

8   we could put in as we go forward. Karl is

9   jumping up and down so I must have said

10   something silly.

11   (Laughter.)

12   MR. NEBBIA: It's called the issue

13   of piling on. No. Let me make this point. We

14   through our study had concluded that the

15   government could move out of the band, the

16   whole band, but that it was going to cost a

17   lot of money and take a lot of time to do

18   that. There were a couple of systems like the

19   satellite systems that we knew would not move

20   out of the band, or couldn't be moved out in

21   any reasonable time. So, given that, we're

22   going to relocate -- there was going to be

1 from our experience a 1710, a 755, a

2 transition and during that transition people

3 were going to have to figure out how were they

4 going to work together. How close could they

5 get together? How could they share the

6 spectrum in that transition? So, the lightbulb

7 went on. Okay, well, if you learn what those

8 rules are about sharing, maybe those same

9 rules apply, what if we share permanently? So,

10 we envisioned this discussion really to be

11 about sharing. That we had said yes, we could

12 get out but as we began to have that

13 conversation, you know, we needed to go

14 through that to figure out could we save costs

15 by sharing, not move people out. That's very

16 expensive. And what are the parameters for

17 doing that sharing? And that's what we, I

18 think, envisioned to be the nature of the

19 discussion. And part of the challenge we

20 couldn't quite get away from is people wanting

21 to sit down and say well, no, no, we'd like to

22 have a new discussion about relocation. We'd

1   like to figure out different ways that we

2   could do that. And that became the real

3   difficulty for us, is we felt the real

4   conversation about was how do we share during

5   the transition, and if those rules work there,

6   could they be applied more broadly to an

7   ongoing sharing arrangement that could share

8   -- save us all the cost, or most of the cost

9   of moving. And that's what we felt, or at

10   least I felt the discussion was about. And we

11   had that difficulty of people wanting to say

12   no, we would like to go back and recalculate

13   the cost of the government moving out. We want

14   all that information. And I think that was

15   unfortunate, and probably we could have -- I

16   could have stepped in and said no, I don't

17   want to have that discussion. In the end, I

18   chose as sometimes we do in different settings

19   to let folks continue to talk to each other to

20   see what optimum thing might come out, and

21   maybe we could certainly provide a clear

22   direction. But we did see the discussion was

1   about sharing. It was necessary. If we

2   concluded it was going to be about relocation,

3   we were still going to have to do sharing

4   anyway, so that's what we

5   (Simultaneous speech.)

6   MR. KAHN: This is Kevin Kahn, if I

7   could get in. I wanted to second Dennis'

8   comment in the following sense. What I tended

9   to see was the lawyers, and I'm not using the

10   real lawyers, I mean the lawyers in the room,

11   and I mean the technical lawyers in the room,

12   would go back to the terms of engagement and

13   read them extremely narrowly when they wished

14   to not engage certain discussions. And I think

15   that was -- they were set up to do that in

16   some sense, but it was not as productive.

17   If the question really that we

18   want to all get to is what things will work

19   together in the real world in a practical

20   sense, then you have to have a little more

21   flexibility than some arbitrary noise level,

22   you know, criteria or some other arbitrary a

1   priori, you know, first approximation that was

2   used to start the discussion. And what I

3   tended to see was people retreating behind the

4   definitions saying well, we were given the

5   definition of what allows sharing, and so

6   that's all we can do, which is different than

7   a discussion that would have been perhaps

8   conditioned by more of a do the right thing

9   kind of approach, wherein people would say all

10   right, the thing we're trying to get to is

11   where can we, and where can't we effectively

12   share, and that's not necessarily about, you

13   know, kind of a narrow mathematical -- a

14   single narrow mathematical number. It's a

15   practical real world question, and I just

16   think that could have been -- in the future we

17   should find a way to open the discussion a

18   little more so that we don't get into

19   procedural details, if you will, based on sort

20   of kind of an arbitrary set of terms of

21   engagement set at the beginning.

22   MR. TENHULA: All right, thank you,

1   Kevin. So, I'm really aware of the time. We've

2   got basically 45 minutes left, and I want to

3   just touch maybe for five minutes on the

4   process issues, establishment, the leadership.

5   I know there was a dance that went on early

6   on. I think these discussions are kind of the

7   substantive direction. I'd like to -- we can't

8   possibly avoid any kind of rehashing or

9   retrying of any substantive conflicts and

10   disputes from now on because I know that we

11   want to really get to the information, access

12   information, management issues, as well. So,

13   the -- one of the issues like the folks

14   started to chime in on is participant

15   selection. It was an open selection process,

16   basically anybody and everybody who wanted to

17   participate from the federal side, non-federal

18   side, and some other side if they could find

19   it were invited to attend. That's the nature

20   of an Advisory Committee process.

21   The leadership and the work

22   management, the Co-Chairs I think have

1   positive feedback by having both a federal and

2   a non-federal, or industry/government co-chair

3   structure. Any thoughts on that, and how that

4   worked out, as having the co-chairs. And then

5   the work process. So, those are the kind of

6   issues on the table now. Let's try to do

7   quickly five, seven minutes of that really

8   high-level points on any of those issues.

9   I want to first hear from any co-

10   chairs specifically about kind of that

11   dynamic, either the co-chairs. Fred, you were

12   one of the initial co-chairs, Mark, you're a

13   co-chair, Ivan. You know, how that co-chair

14   relationship worked out, what was the working

15   process between the other co-chairs? And then

16   the chairs, generally, co-chairs, we heard a

17   lot about the need to kind of harmonize things

18   across working groups, and maybe even figure

19   out maybe transfer things from one working

20   group to another, share information among

21   working groups. So, if you want to just talk

22   about that from a co-chair perspective, that

1   would be great. Mark, do you want to start?

2   MR. RACEK: Sure, I can start. I

3   thought that the -- that sort of organization

4   within each one of the working groups was

5   very positive, because I felt like that

6   without having my sort of NTIA contact or the

7   federal agent that actually had a stake into

8   the outcome of the working group as the co-

9   chair helped sort of bridge their interest

10   with the industry interest, as well. Not only

11   that, but they sort of had the knowledge of

12   the systems that were being considered either

13   for sharing or relocation and were, I think,

14   able to sort of draw their interest into the

15   working group and provided a nice cohesive

16   sort of working group.

17   MR. TENHULA: Fred, do you want

18   MR. MOOREFIELD: Sure. So, a couple

19   of points that are positives. I think that the

20   process, I think -- I thought the architecture

21   for how you established this process I think

22   was good, where you had the oversight group,

1   the co-chairs, the CSMAC liaisons overseeing

2   all the work, the co-chairs from both industry

3   and the federal government I thought was good

4   and balanced. Even the sub-working groups,

5   only because Working Group Five was just so

6   cumbersome with so many systems to deal with.

7   So, I think that process was good.

8   I think some things that could be

9   fixed is a clear process for resolution of

10   issues, you know, and what is that process? I

11   don't think everybody really understood what

12   that process was. I thought it was the

13   Management Oversight Group where you would

14   bring issues back and then they would come

15   down with some discussion at that level, and

16   then it would come back down, but I think

17   other folks thought there were other

18   processes, so I think a clear resolution

19   process would go a long way.

20   I think a better sharing of

21   information across all working groups. I think

22   that could have been done better. Going back

1   to what Jennifer said, we were talking about

2   the same band, and whether we're talking about

3   I to N criteria discussions, whether we're

4   talking about models, that crosscutting across

5   all working groups could have been done

6   better. And I'll put that on the co-chairs

7   could have done a better job of doing that,

8   even myself as a co-chair of Working Group

9   Five. We started out the discussion but we

10   never really followed through because there

11   was just so much work to do in such a short

12   time frame, a lot of that stuff kind of got

13   lost in the shuffle with all of the other

14   stuff, and trying to manage the group. So, I

15   think that would go a long way.

16   I think another thing, from the

17   DoD perspective release of information to the

18   public was huge for us. You know, in my new

19   job in DoD I just never really understood the

20   process of what it really takes to get stuff

21   out of the building. That has to be factored

22   into this. You know, that's our process and

1   it's not going to change because of a sudden

2   Spectrum is important. We have to go through

3   that process to get information out to the

4   public, and we need to figure out how to

5   factor that in. We even started looking at it

6   within DoD and trying to back it up based on

7   when deliverables were supposed to be

8   delivered to the working groups, and it was

9   almost impossible.

10   MR. TENHULA: So, Fred, a release

11   of information to a working group because it

12   was especially open entry kind of membership

13   basically is tantamount to a release to the

14   public.

15   MR. MOOREFIELD: Correct. Because

16   we're on the phone, we don't know who's on

17   that call, whether somebody overseas somewhere

18   or whatever, it was open to the public, so

19   that information would have been put on a

20   public portal, as well, so not only talked

21   about on the working group open call but also

22   provided to anybody in the world that wanted

1   to see that information, so we had to go

2   through a clear public release process to make

3   sure not just the spectrum guys, but others

4   within the Pentagon can look at that data and

5   say it's okay to put out in public. I don't

6   care if it's in Wikileaks or whatever is out

7   there, but for DoD to put it out there and say

8   here, yea verily this is what it is, is a

9   different thing than somebody on Wikileaks

10   posted it and nobody knows if that's really

11   valid or not. So, that has to be factored into

12   the process. Thank you.

13   MR. TENHULA: All right. Any other

14   Co-Chairs? Mike on the line, Ivan, if you want

15   to chime in about kind of the co-chairing

16   aspect of this.

17   MR. NAVARRO: Yes, thank you. Ivan

18   Navarro, Working Group One Co-Chair. I guess

19   as the Co-Chair of Working Group One I was

20   probably one of the more fortunate. We had

21   much clearer marching orders, not to beat the

22   dead horse of the framework, but we didn't

1   have a problem with the framework. We knew we

2   were going to be sharing, so that was very

3   clear. That led us to the first thing we had

4   to do, was to resolve the conflict between the

5   Fast Track report that did a sharing study and

6   then the industry knowledge of what their

7   system capability was and how it differed from

8   what was in the report, so that led to that

9   technical panel and getting a consensus of

10   what the technical parameters of the industry

11   system would be that we would be sharing with,

12   and that took a tremendous amount of time. And

13   I'd like to thank Steve. Steve was very good

14   to work with. I don't know how -- what the

15   process was for selecting the co-chairs. He

16   was a good choice. He was very easy to work

17   with, and I think we got along very well. And

18   I was nominated, I guess, so I accepted. I

19   don't know how that happened, but here I am.

20   And one of the things that was

21   very challenging for me was the time. And I

22   think I could have done a much better job in

1   my role as Co-Chair, and I was limited by my

2   day job, unfortunately. And I don't know if in

3   the future for government co-chairs there's a

4   way to make it perhaps a detail assignment or

5   something along those lines that would somehow

6   allow me to dedicate more time and not be so

7   encumbered by my normal duties, which I was

8   not relieved of in any way. So, that's all I

9   have to say about that.

10   MR. TENHULA: Okay, thank you. Any

11   co-chairs on the phone want to chime in? You

12   have one point?

13   MR. NEBBIA: Just one quick point

14   on the issue of the clear process for

15   resolving issues, and I'm sure I'll be

16   credited for being really smart or really

17   stupid for this comment, but it was my actual

18   intentional decision to not give a clear path

19   to resolving them so that the groups hopefully

20   would resolve them internally and not be

21   constantly coming asking for somebody else to

22   make the decision. So, once again, I may be

1   found to be the dumbest guy on earth or the

2   smartest guy on earth, but anyway

3   (Off microphone comment.)

4   MR. TENHULA: And, obviously, I

5   think a lot of those issues may have resolved

6   substantive scope like the JTRS issue, some of

7   the issues may have resolved about whether --

8   how tight the charter or the framework

9   document was. But I would say the bulk of the

10   issues revolved around information sharing, so

11   we're going to turn to that issue now and talk

12   about kind of ways to improve that. We heard

13   about Trusted Agent concept, we heard about

14   ways to -- and because of the FACA overhang

15   with the -- as Karl mentioned, the benefits of

16   that and the transparency requirements there

17   that brought the consensus benefits that we

18   get, and building off what just Karl said

19   about the intention of not putting those

20   things in. I was involved in drafting it and

21   the intention of putting the hope maybe ended

22   up being one of the dumbest things, the hope

1   in the document that the groups themselves

2   would work out the ground rules and

3   potentially have kind of a way to have side

4   conversations, and ways of protecting and

5   managing information consistent with the

6   company or the industry's practices consistent

7   with the DoD practices. That may be kind of

8   informal groups or even bilateral type of

9   information exchanges going on that could then

10   without revealing the information inform a

11   working group or sub-working group. And that

12   was probably a little too hopeful in the end.

13   Let's start -- let's tee off the

14   information management issue. Let's talk about

15   the -- I was going to actually talk to you,

16   Bob, about the portal.

17   MR. LYON: An observation I want to

18   make on the portal, the process, and that is

19   given that there was a time line that this

20   work had to be done within that time frame,

21   what we found in doing that was that some of

22   the information that we were provided, for

1   example, rightly was examined by the scope.

2   For example I want to characterize transmit of

3   power with the probability of distribution.

4   Okay? That's good. A move from what we started

5   with, but it's going to take time for them to

6   develop that. And if it takes time for them to

7   develop that, that impacts the analysis we do.

8   And then if we go down the road a little bit

9   further, so that's the right thing to do but

10   it takes time.

11   The other thing is then they

12   looked at we started with a distribution of

13   stations at the grid, that's what we provided,

14   industry looks at it and says well, you know,

15   we don't really like the answers that's given

16   us, and it's not accurate. Let us go back and

17   develop something other than the grid. Okay,

18   fair enough, do that. But, again, that causes

19   us to stop what we're doing and go back and

20   start all over again for every single piece of

21   equipment that's in Four and Five.

22   Now, those -- you can build a case

1   that it's right to have that part of the

2   process for examining these assumptions and

3   altering them so they're more accurate, but

4   you have to recognize the impact that it has

5   on trying to meet this deadline given that

6   there's fixed resources.

7   MR. TENHULA: John.

8   MR. HUNTER: John Hunter, T-Mobile.

9   I think with just the process in general, you

10   know, I kind of look at it as making sausage,

11   right? It's messy, it happens, but I think you

12   can't deny the results that come out of this.

13   I think if you look at the industry roadmap

14   that was produced, if you look at the DoD

15   proposal that's on the table, this is moving

16   forward. And it's an amalgam of sharing,

17   relocation, and it all came from the CSMAC

18   Working Group process, it came from the

19   Feasibility Study, you name it. So, I think

20   there's a lot of room, I think, for

21   improvement.

22   One area on, I think, information

1   sharing would be having industry members with

2   the appropriate clearances. I think if some

3   government entity that possesses sensitive or

4   classified information and there is an

5   established need to know by that commercial

6   entity, that it would seem relevant that you

7   would have that federal agency sponsor

8   industry members. And that wouldn't stop just

9   for this particular effort. I'm dealing with

10   an effort right now with DoD on something that

11   has to do with AWS1 that involves sensitive

12   information on a DoD system. So, I think that

13   if we could leverage something there, whether

14   it's NTIA sponsoring the clearances, whether

15   it's DoD, DOJ, whatever, but I think that

16   would go a long way.

17   I mean, our Trusted Agent process

18   took like seven to eight months to resolve.

19   And I think if we can recognize this in the

20   front end and figure out what we need to do

21   that's going to satisfy and mollify the

22   concerns of DoD that they're going to feel

1   comfortable releasing that information, let's

2   figure out that process and put it in place

3   before we start one of these efforts moving

4   forward.

5   MR. TENHULA: Fred, what -- I'm

6   going to go to Burrow in a second. Fred, what

7   was kind of the main concerns DoD had. And Ms.

8   Takai was here at one of the CSMAC meetings

9   and kind of outlined the NDA, which was

10   basically a bilateral, you know, approach to

11   sharing information with individual companies

12   or individual industry parties. But then I

13   think those industry parties had to

14   collectively gather information, as well,

15   which may have taken time on that end, so was

16   it helpful?

17   So, you know, our hope of a kind

18   of a bilateral or side kind of ways of

19   exchanging information, you know, that didn't

20   involve long drawn out processes, what were

21   your other concerns, though, that -- Ms. Takai

22   mentioned some of those, but do you mind

1   talking about when you are dealing with

2   industry folks that are not your typical --

3   you deal with industry a lot, you know, that

4   are mainly contractors in the DoD world, but

5   from a general government agency perspective,

6   you know, how can you -- how do you see

7   potentially streamlining kind of that approach

8   without getting kind of anybody in the middle?

9   The Trusted Agent concept is kind of more of

10   the middleman approach. This is more of a

11   bilateral approach, I'll call it, of direct

12   interaction between federal entities and non-

13   federal entities.

14   MR. MOOREFIELD: Fred Moorefield,

15   DoD. So, I'm not going to talk about that to

16   infinity so let me kind of break it down in

17   some areas. So, this is our number one issue

18   right now. We recognize the fact that from an

19   industry perspective they have to have access

20   to a certain amount of information for them to

21   make an informed business decision to invest

22   their money. You know, is it good for all of

1   us both on DoD side and industry side, and for

2   the country, so we recognize that. But on the

3   other side we just need everybody to

4   understand from a DoD perspective that

5   information has to be protected. So, even

6   information that you may look at as

7   unclassified, so how come everybody in the

8   world can't have it? Like I said earlier,

9   there's one thing for you to pick it up on

10   Wikileaks or some of these other sites out

11   there, but for DoD to provide you that

12   specific frequency, or that specific UAS, or

13   that specific air combat training system where

14   we're training our fighters how to fight a war

15   is different than somebody picking it up off

16   the internet, so we're now validating that

17   information. So, I think just understanding

18   both sides and how do we reach that balance so

19   that both sides can get what they need that's

20   good for the country, but also to protect

21   military operations because this isn't just

22   about the U.S., this is about our global

1   operations. That's one piece.

2   I think what he's referring to, we

3   do share information internal DoD. We have

4   contractors, MITRE and the contractors,

5   established processes within those companies

6   on how we protect information, how we share

7   information, so those processes are well

8   documented and well utilized all the time so

9   we're comfortable with that.

10   To open it up to sharing of

11   information with industry at this larger

12   scale, and this is the first time that we've

13   ever done this, is going to take time to work

14   through, you know, so the processes are not

15   necessarily set up with hundreds of wireless

16   broadband providers to be able to share, the

17   ones who win the options, to be able to share

18   that level of information with that large

19   number of people in a controlled situation.

20   Where military is comfortable that we can give

21   you that -- but we're in a situation, we're

22   talking compression, relocation, and sharing,

1   so to give all of that information, and we

2   still need to continue the discussion of what

3   information do you really need, right, for

4   stuff that is moving. I think the stuff in

5   1710 to 55 was a good example, maybe a

6   baseline starting point of what we can put out

7   there for industry to be able to make an

8   informed decision about investing their money.

9   I think the current NDA process

10   that we have in place is not a sustaining

11   process, where we only have a limited number

12   of industry folks sharing information. We've

13   got to do something better than that. I think

14   we're looking at this from a grander scale

15   when it comes to sharing, so we need to figure

16   out what that grander scale of sharing

17   information is going to look like. Again, you

18   know, you can look at different communities

19   from a broadband perspective, there's hundreds

20   of broadband hopefuls out there that they're

21   going to be bidding on this spectrum. But if

22   you go into the satellite sharing situation,

1   there's a lot less companies out there, so

2   you're looking at a more controlled potential

3   environment versus a more widely uncomfortable

4   environment for DoD to feel like we can share

5   that kind of information in the public like

6   that.

7   Again, it's not about the

8   unclassified information, you know, just as a

9   vanilla white kind of thing. Again, it's the

10   specific frequencies for systems that we

11   actually use in war. Even though we're in the

12   United States just training, those are systems

13   that we're taking to theater. And in some of

14   these cases this information we're not leaving

15   the band, we're sharing the band, but there's

16   different aspects, that we need to look at all

17   those different pieces and figure out, again,

18   what does industry really need for them to be

19   able to invest in the spectrum in a manner

20   that's going to garner the most money for the

21   spectrum, and get everybody what we need from

22   an economical perspective, but also protect

1   DoD from a national security perspective.

2   MR. TENHULA: Okay. I'm going to

3   turn to Bob in a second, but I also wanted to

4   -- was there also concern about entities that

5   had access to information versus entities that

6   did not have access to it, either for purposes

7   of potentially bidding on a future government

8   contract, or just generally in the sense of

9   you had the information in the hands of, you

10   know, one entity like John's, like T-Mobile,

11   you know; whereas, Sprint or another carrier

12   may not have been a party to one of these

13   deals. Was that a -- or maybe even traditional

14   government contractors, some that had it, some

15   that didn't. Was that a concern?

16   MR. MOOREFIELD: That was an

17   acquisition concern from our perspective. Just

18   so we didn't get into an unfair competitive

19   advantage for some companies that had access

20   to information, specific frequency information

21   that others didn't or couldn't get access to,

22   or give them an unfair advantage on. From that

1   perspective, our legal folks raised that on

2   this one point. So, this is really a two-way

3   conversation when we talk about -- I think

4   this is coming down to not only the government

5   protecting national security information, but

6   also from us receiving information from

7   industry to validate whether it's the

8   resiliency of your system, the mitigation

9   techniques that are available in each

10   individual system, because I'm sure each

11   company has their own perspective on those

12   kind of things. There's a proprietary

13   partitioning that we need to discuss for them

14   sharing information with the government, but

15   also the other way with the government sharing

16   national security kind of information, or

17   information that needs to be protected with

18   industry, so it's kind of a two-way thing we

19   need to address.

20   MR. TENHULA: Bob, you had your

21   hand up.

22   MR. ATKINS: Yes, and I actually

1   still remember what I was going to say.

2   (Laughter.)

3   MR. ATKINS: It didn't work for

4   you, though, but nice try. Actually, what I

5   wanted to say is very related to what Fred's

6   been talking about, and that was one of the

7   things in Working Group Three as we were doing

8   some of the technical analysis, specifically

9   focusing on some of the satellite aspects, was

10   that our folks, the engineers, would do a lot

11   of the analysis, but once it was complete it

12   had to go through a public release process,

13   which would actually slow down the release of

14   the information, which made the Working Group

15   Three time line somewhat more challenging.

16   The second part, though, that was

17   difficult to deal with is that the engineers

18   had to keep in mind what was publicly

19   released, as opposed to what they were working

20   on, and they had to always keep that in mind

21   when they were in discussions with -- in the

22   open forum

1   MR. TENHULA: You're talking about

2   the government engineers.

3   MR. ATKINS: Yes. So, it was this

4   kind of challenge that they were always having

5   to keep in mind as they got into these

6   dialogues. And I think it would -- if there

7   was a way to start to control the size, or

8   actually control the makeup of the group such

9   that at least it was no longer defined as a

10   public forum where it could be more openly

11   discussed that would be beneficial, I think,

12   in some of this work. I don't think any of the

13   technical material was ever held back. It just

14   took longer, is really what took place.

15   And the only thing I wanted to

16   kind of just -- one other part of that was on

17   the positive, very positive side was the

18   working groups did not feel constrained to

19   spin off other sub-working groups that started

20   to develop information that all the other

21   working groups could make use of. Working

22   Group One got into some material that the

1   other working groups actually expressed

2   appreciation for the work that was done in it.

3   And Working Group Three, I'm sorry, Two was

4   also the economic areas, and things like that.

5   So, really good information was shared,

6   although it might be useful sometimes that

7   these subgroups could then reach into the

8   other working groups to pull in some of the

9   experts to assist in that work. And that's

10   all, thanks.

11   MR. TENHULA: Okay. I'm going to go

12   to Jennifer, Tom, and then Dennis, but I also

13   want to give Larry Alder a chance to, if he

14   does, ask any questions after those three go

15   in light of your new -- in light of your

16   current committee working group on these

17   issues, if there's any particular questions

18   you want to ask the co-chairs on that. But

19   I'll go to Jennifer next.

20   MS. WARREN: Thank you. I'm

21   Jennifer Warren. I think the structure is

22   something that keeps coming back up, and while

1   I think T-Mobile said it well in their

2   comments about, you know, we support

3   transparency and what have you, but actually

4   has the countervailing factor of limiting the

5   exchange of information. We need to look at

6   how much flexibility is there even within the

7   current FACA. And I will tell you, there is no

8   uniform application of FACA across government.

9   It's one statute but somehow it is widely

10   interpreted in many different ways, and USTR

11   has a way of having closed but embedded

12   sessions that are classified. I presume we

13   would, too, and if we wanted to have a CSMAC

14   only with the invited larger defined group,

15   maybe there's some flexibility there, so I

16   want to encourage that.

17   One thing that when we're talking

18   about public releasability, we haven't really

19   touched upon the export control aspects of

20   this. And public releasability, that might not

21   be as interpretive as worry about export

22   control, but export control is not just, as

1   many of you know, the sending of technical

2   information overseas, it's having a non-U.S.

3   citizen in the room, it's having people dial

4   in from overseas even if they are U.S.

5   citizens, so many of us who have to deal with

6   export control and ITAR want to raise this and

7   make sure that we're not inadvertently

8   overlooking that, and we can be compliant. I

9   don't want to see a new hurdle come up, so

10   when we're looking at public releasability, if

11   we could fold that in. Thank you.

12   MR. TENHULA: Tom?

13   MR. DOMBROWSKY: I just want to

14   react to a couple of things Fred said. And

15   from an industry perspective, I don't think we

16   want or need all hundreds of our mobile

17   broadband guys sitting at the table. I think

18   what the real desire is to get an informed

19   understanding, especially in a relocation

20   process. So, if there's a relocation process

21   and we have a credible number of folks that

22   were sitting at the table understand what

1   needed to be done, that's great.

2   I think where you get a more

3   broader need is if you have an ongoing sharing

4   situation, and I think that's where you have

5   the hundreds of people kind of problem, more

6   so than an understanding of what the criteria

7   are.

8   Now, what you can do in a small

9   select group, I still think, is set the

10   criteria and then publish that criteria to

11   everybody and sort of say we looked at it as

12   an industry. We believe what they're telling

13   us, they're believe what we're telling them,

14   here's the criteria. And that can be

15   publicized to the hundreds, if not hopefully

16   thousands of mobile broadband users out there.

17   So, I just would challenge the idea that we'd

18   have to have everybody at the table sort of

19   like what we did in a lot of these processes.

20   I don't think that's necessary, and I don't

21   think the industry needs that sort of level of

22   certainty to have everybody at the table

1   during all those discussions.

2   MR. TENHULA: Dennis.

3   MR. ROBERSON: Well, firstly, since

4   our time is moving on, I was going to hold

5   this until the end, but I personally view this

6   whole process to be a fantastic process,

7   really a positive process. And contrary to

8   Mark, I think this was a let's do it again

9   process really, because I think we're

10   (Laughter.)

11   MR. ROBERSON: Yes, I think we have

12   learned a lot   no, that's the whole point,

13   this session is all about that. You know, we

14   have learned a lot, and I think it would

15   terrible for us not to take advantage of the

16   platform we've developed and are continuing to

17   develop, and it's a continuous improvement

18   process. We understand that, but I think that

19   we ought to move forward with that.

20   I think the key on this whole

21   communications front is that we do have a

22   process now with the Trusted Agents. I

1   understand what Fred said that, you know, it's

2   not the perfect process and all that, but I

3   think it is a huge step forward. And I think

4   we ought to -- we've never really used the

5   process because it came so late in the cycle,

6   so I would like to see us explore that

7   process, exploit that process and take

8   advantage of it as we do move forward, because

9   I think it does give us the more controlled

10   access so that we have people that are

11   knowledgeable on both sides, maybe understand

12   the commercial side, can understand the side

13   -- there's some uncomfort with small groups

14   that have this knowledge, this special place

15   in the ecosystem, but I think it's a really

16   good step forward that we should take

17   advantage of.

18   The other point that actually fits

19   with the Trusted Agents is this notion of the

20   special groups. We did have the Working Group

21   One with the trusty LTE trigger first because

22   they were earlier in the cycle and, therefore,

1   were able to contribute to the other groups.

2   And I think that was a really good thing, too.

3   And it brings to light the notion that we

4   ought to build that into the process, the

5   notion that there are going to be some

6   foundational elements that are going to be

7   needed by all of the groups, and to build that

8   up front, we're going to find those when we

9   find them, we're going to instantiate a group,

10   we're going to make sure that there's a

11   communications path to the rest of the working

12   groups. I think that'll be a very, very

13   positive step.

14   The other element that relates

15   very directly to that is access to resources,

16   because there are very scarce resources on the

17   commercial side, on government side in some of

18   these technologies. So making sure that we

19   access those scarce resources once and not

20   five times in an efficient way, that fits into

21   this, as well, and it may even fit into what

22   Ivan said with when we find those that are

1   really critical, we can find a way to even

2   hive off some of those groups for short

3   periods to really do that work to benefit the

4   whole operation in an efficient way.

5   MR. TENHULA: Okay. I think we're

6   going to spend about three to five more

7   minutes on this topic. I'm going to get to

8   Mark Gibson, and I also want to see if anybody

9   on the phone wants to talk about the

10   information access issues.

11   Larry, your working group is

12   working on this. I think we heard a couple of

13   comments from the federal side about this

14   mysterious public release process. Is that

15   something that perhaps your working group

16   might need to learn more about from federal

17   organizations?

18   MR. ALDER: Yes. For those of you

19   who don't know, we're the working group in the

20   CSMAC right now, we are looking at the issue

21   of okay, you have to share information, even

22   have these manual kind of coordination

1   discussions, but what about if you try to

2   automate with some kind of a database like

3   goes on in the TV white spaces right now where

4   the system that's being coordinated with is TV

5   transmitters, and those go into a database and

6   devices then can find out what spectrum is

7   available, and the database knows what

8   frequencies the TV transmitters are on, so the

9   question is how do you do that in a situation

10   where that kind of information might be

11   sensitive or classified? So, I think there's

12   two steps to that process, and the first step

13   is to have a discussion about it, not even the

14   actual technical implementation. It sounds

15   like maybe the Trusted Agent, you know, is a

16   viable way to that; although, I'm hearing Fred

17   saying he's got concerns about the scalability

18   of that. And then really the second question

19   is how do you actually implement that in a way

20   that's going to be comfortable for the DoD? I

21   think that's going to be -- that's the subject

22   of the working group and, obviously, a harder

1   question.

2   I think later today our working

3   group will propose doing some case studies to

4   really do something specific so we can work

5   through that, but I'd be interested

6   particularly here, I think there's been some

7   discussion, you know, why you do feel the

8   Trusted Agent might be insufficient, because

9   I've heard some people say it's good. I'm not

10   getting a clear picture on the Trusted Agent

11   piece of it.

12   MR. TENHULA: Let me turn to Mark.

13   MR. GIBSON: Go ahead and let Fred

14   or John comment on that, because

15   MR. TENHULA: Okay.

16   MR. GIBSON: -- I think it's

17   timely, and I'll reserve my comments for when

18   they're done.

19   MR. HUNTER: Yes, John Hunter. No,

20   I think the piece with the Trusted Agent, what

21   we found, it's actually very limited in what

22   you can get access to. I mean, we were -- the

1   vast majority of the systems we were dealing

2   with were FOUO or government sensitive

3   information.

4   Nonetheless, there were a few

5   systems that were classified, and that's why

6   I bring up this notion that if we're going to

7   do this moving forward in setting up NDAs, I

8   mean, that's good, but it has its limits. And

9   I think what we're going to really require at

10   some point, industry members that are part of

11   this process are going to have to go through

12   the clearance process. They're going to have

13   to go through OPM, get their -- go through the

14   process just like DoD contractors do, and

15   really, you know, if they're qualified,

16   they'll get a clearance. If they're not, they

17   won't. But I think we are at a point,

18   particularly giving long-term sharing

19   arrangements, that we are going to have to

20   start looking at this and making sure that

21   whatever agency that possesses that classified

22   information, that they on board to sponsor

1   industry members.

2   MR. TENHULA: Fred.

3   MR. MOOREFIELD: Yes, so I'll go

4   back to comments I said earlier. This isn't

5   just about -- this is about sharing with

6   industry across the spectrum period. Right?

7   So, this isn't just about broadband and

8   whatever. So, I think the first thing we would

9   look at is -- I think there's different ways

10   you can look at a Trusted Agent. Right? So, I

11   think you can look at different areas of

12   Trusted Agents. You could have NTIA-FCC as a

13   Trusted Agent for the federal and non-federal

14   entities. You can have an individual

15   contractor as a Trusted Agent, so I think

16   there's different aspects of what a Trusted

17   Agent would look like.

18   I think that discussion needs to

19   continue. I think there's probably some other

20   aspects of what a Trusted Agent, just my

21   perspective, but I think that conversation

22   needs to be first, what is -- who is the

1   Trusted Agent to address how we share across

2   the spectrum, you know, in different areas,

3   domains, whatever. I know there's some concern

4   from industry that, you know, that the FCC and

5   NTIA may not have the expertise in certain

6   areas to address that. We need to talk about

7   that, but I think it just depends on what you

8   mean by Trusted Agent.

9   We haven't concluded on that yet.

10   We're still having deliberations as to what

11   that means. I think we agree that we do --

12   we're more comfortable with a Trusted Agent

13   aspect, you know, versus the process we're

14   working through now. But I think there's more

15   to come on that, and more dialogue that we

16   need to continue to have until we finally

17   converge on something I think everybody is

18   comfortable with.

19   MR. TENHULA: And let's go to Mark

20   Gibson, Mark Racek, and then check to see if

21   there's one person on the phone that has

22   anything on this information, and then we're

1   going to move on to our last two topics.

2   MR. GIBSON: All right. Thanks,

3   Peter. You know, with respect -- this is not

4   what I was going to say, but the Trusted Agent

5   concept kind of got me thinking. You know,

6   there's something we need to talk about in

7   terms of the Trusted Agent, and we actually

8   kind of got into that in the Working Group

9   Five discussions, and that's sort of a

10   differentiation between sharing data and

11   sharing information.

12   You know, I don't mean to split

13   hairs, but one of the -- one thing that we in

14   the CSMAC in this process were lacking was

15   just an open discussion, or a discussion, say

16   open but a valid technical discussion on

17   things like propagation modeling, interference

18   analysis, parameters, methodologies, and that.

19   So, it would -- if the concept of sharing data

20   on specific assignments and allocations proves

21   problematic, if not impossible, then one

22   possible fallback might be that there is a

1   collaboration that occurs under this Trusted

2   Agent auspice to have agreement on analysis

3   methodologies and parameters, and that

4   establishes trust, and then the DoD or the

5   government can run the analyses safeguarding

6   the data, providing results under some

7   auspices, so that both sides are comfortable

8   that there is trust on both sides, and that we

9   can move forward with sharing.

10   What it does, it mitigates against

11   having to provide data under whatever, NDAs or

12   whatever, but what it allows us to do is like

13   what we were kind of trying to do in the

14   technical working group, was establish

15   framework for analysis. And we kind of got

16   halfway there, not halfway there, got a little

17   bit of a way there but we didn't -- you know,

18   it just got stopped, and that's what Bob's

19   been saying. So, it's possible that that might

20   be a middle ground approach to take to arrive

21   at this issue.

22   The other thing I was going to say

1   is what we are lacking in this discussion of

2   Trusted Agent is derivative information. So,

3   for example, there was a measurement effort

4   that was undertaken under Working Group Five

5   on the airborne equities, and the results of

6   that measurement effort was not really allowed

7   to be shared. And we all understand why, but

8   it kind of means that if there is a way to

9   inform this effort from the standpoint of now

10   doing testing and measurements, there needs to

11   be a process to allow that to inform the

12   analysis methodologies.

13   You know, if we go out and we do

14   some measurements and find that X operations

15   occur in a way that facilitates sharing, and

16   that's good for both sides, we need to have a

17   way to roll that in, so it's not just data on

18   these systems, it's what we might measure.

19   MR. TENHULA: Mark.

20   MR. RACEK: Just on the Trusted

21   Agent aspect of it. Yes, I sort of underscore

22   what Fred was saying about sort of the lack of

1   scalability, because the -- you know, there's

2   -- the breadth and width of the scope of sort

3   of the amount of technical information that is

4   sort of required and discussed during these

5   activities usually requires more than one

6   person be party to that. Matter of fact,

7   there's sort of some of the things that I've

8   seen actually would require different people

9   with different expertise to be involved, and

10   if you think of that from a dynamic aspect,

11   that every time that you want to sort of

12   discuss a particular issue you have to start

13   issuing NDAs to be able to do that. And then

14   when you sort of change to a different band or

15   a different system, then you would have to go

16   ahead and start the NDA process a little bit.

17   And I think from my perspective, at least,

18   trying to manage that

19   (Music interference.)

20   MR. RACEK: I can talk over the top

21   of that.

22   MR. TENHULA: Make sure you do it

1   in rhythm.

2   MR. RACEK: Yes.

3   (Laughter.)

4   MR. RACEK: A little cadence

5   routine going on here. And I think sort of the

6   other aspect may be more about sort of the

7   I've totally lost my train of thought with

8   the music.

9   MR. TENHULA: That's fine. So, the

10   contribution from the phone has been sharing

11   of music, hopefully that does not count as a

12   public performance and we have to pay

13   copyright royalties on that wonderful tune.

14   Anybody on the phone just want to

15   chime in quickly on the information disclosure

16   issues, if possible over the music. Otherwise,

17   we're going to move on.

18   MR. NEBBIA: Can I make one quick

19   point?

20   MR. TENHULA: Karl is going to make

21   a quick point.

22   MR. NEBBIA: Just with respect to

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1   what Mark Gibson said. I think what you said,

2   Mark, is very, very true. We can get to better

3   places with more agreed analysis methods, but

4   as Bob said earlier, that's a big challenge.

5   That's something that requires -- I mean, the

6   ITU spends years developing certain types of

7   analytical techniques and so on. And I think

8   that becomes the issue here, do we want it, or

9   do we want it fast? And oftentimes, we want it

10   fast is kind of the underlying pressure. And

11   when you want it fast, then it makes it very

12   difficult to do the kinds of things that I

13   think get us to that endpoint.

14   I think we're even experiencing

15   somewhat that in the Trusted Agent aspect that

16   now that there's at least some feeling that

17   the pressure is off, we've delivered the

18   reports, we've set up the stuff, that the

19   Trusted Agent discussion has actually been

20   moving very slowly. I think you characterized

21   them as coming to a complete halt all

22   together, and I think it's important that that

1   work continue to move on. But I do think if

2   you want it fast, you have to make very clear

3   assumptions. It makes it difficult to do what

4   you've said.

5   MR. GIBSON: Can I comment? Because

6   I just -- I'll speak for -- I won't speak for

7   industry, I'll just speak for our role in the

8   process, that being as a consultant, and as a

9   CSMAC person. We want it as fast as possible,

10   but I think this effort underscored the fact

11   that, you know, we're moving at different

12   speeds. But I don't think that not being able

13   to have it fast should overwhelm not being

14   able to have it at all. You know, I think

15   we've learned a lot through this process. I

16   think that everybody has given kudos to the

17   extent to which DoD and other agencies have

18   put skin in the game, we all have. And I think

19   we've got a lot of good things to learn from

20   that. And I think the Trusted Agent is a good

21   start forward. It may not look ultimately at

22   all what it looks like now, but I don't think

1   anybody -- well, I'll speak for myself. We're

2   not saying that we want it fast, but I think

3   we're saying is that it's the beginning of a

4   framework to establish discussion and

5   communications on some mutually agreeable

6   approaches and efforts, so I think that that

7   should continue.

8   MR. TENHULA: Quickly, Mark,

9   because we're going to turn to our last topic

10   for -- we might go over about five minutes.

11   MR. RACEK: So, it came back to me

12   when Karl was talking. Some of the difficulty,

13   I think, with the Trusted Agent process is

14   that if you're sort of involved in a lot of

15   the different activities, not just in a single

16   working group, but multiple working group with

17   multiple type of services and you have sort of

18   different Trusted Agent processes that are

19   going on simultaneously, then you start to

20   lose a little bit of track about what is

21   actually classified and what isn't classified.

22   So, you're always sort of thinking well, where

1   did I get this information, who can I talk to

2   with respect to this information, as well. So,

3   I think it's sort of whatever process that is

4   decided in the end, it needs to sort of have

5   its own scope, it needs to have sort of its

6   own focus with its own group, so that you can

7   more clearly identify it from maybe some of

8   the other activities that the same working

9   group is having to deal with.

10   MR. TENHULA: Okay. So, we're going

11   to move on to the final two topics, and I'll

12   lump them together on the Working Group Report

13   production, process, and reporting to the full

14   CSMAC. On the second issue, as Michael

15   Calabrese has already mentioned kind of the

16   need for interim reports. And let me just make

17   a couple of observations based my watching the

18   CSMAC. There are informal and formal outputs

19   that came out of this, and I think they will

20   continue to come out. There are tangible and

21   intangible kind of benefits from the process.

22   The formal are those reports, are

1   the recommendations contained in those

2   reports. The informal are the ones that kind

3   of sprang out of the process, and that were

4   mentioned here, including the industry roadmap

5   document, the DoD alternative plan. Not formal

6   outputs of the CSMAC or the CSMAC working

7   groups, but informed by participation of

8   federal and non-federal entities in the

9   process.

10   Another key intangible are

11   relationships that had not existed before. I

12   think it's very important to note that those

13   new relationships start, and they start to

14   build trust so that we can continue on, you

15   know, in other venues.

16   And then there's -- I would say

17   that even in the formal reports there's

18   possibility -- I think the Working Groups Four

19   and Five basically -- the ability to say

20   here's where we agree to disagree, and here

21   are the issues that we cannot resolve, but

22   maybe require further study, are still very

1   valuable outputs in the formal document. So,

2   I would say that if there's a way to kind of

3   facilitate, you know, at least, you know, the

4   task of identifying and narrowing issues, you

5   know, that

6   (Music interference.)

7   MR. TENHULA: So, whoever put us on

8   hold, take us off hold. Thank you for the

9   music. So, between songs, I'd just like to

10   open that up if anybody wants to comment on

11   those observations both on the production of

12   the formal outputs, and then also, you know,

13   any thoughts on kind of the informal results,

14   as well. Tom, and then Dennis.

15   MR. DOMBROWSKY: Tom Dombrowsky.

16   I'm happy to sort of talk about it. I think

17   one thing that I thought would be helpful with

18   the formal report writing is sort of

19   identifying that up front in terms of who's in

20   charge, and providing maybe a framework to all

21   the working group if you have multiple working

22   groups. We tried to do that in Working Group

1 Five. We had mixed success with people using

2 our template, but it would just help, I think,

3 at the start. You've identified co-chairs, it

4 would also be nice to sort of identify, you

5 know, report writers and make that clear,

6 because in some cases the liaisons of the

7 CSMAC felt like they were obligated to step up

8 and write, and I'm not sure those of us that

9 were liaisons knew that going into the

10 process. So, you know, it would be nice to

11 know what you're signing up for before you

12 actually sign up for it. That would be my sort

13 of recommendation on that.

14 And I think the follow-on piece on

15 your informal point, and frankly on the next

16 steps, it would be nice also to sort of know

17 where we're going. There was a lot of things

18 in Working Group Five that sort of said we

19 should do this, we should do that. To my

20 knowledge, most of that is not being worked at

21 all. So, I mean, from my perspective there's

22 follow-through that should be happening,

1   whether it's through the CSMAC or elsewhere.

2   And, frankly, I'm going to be talking to the

3   industry folks to see if we can't scare up

4   something to do that, so to your point, it

5   still may have some benefit, but some thought

6   to how do we continue to row the boat.

7   Because, frankly, we set deadlines, we get

8   stuff out, we're never going to be actually

9   done. It would be nice to sort of have some

10   follow-through on useful things to continue

11   on.

12   MR. TENHULA: Following up on that

13   point, often you see actual advisory

14   committees turn into outside organizations,

15   independent organizations made up of a lot of

16   the same folks. You know, that happened in the

17   Intelligent Transportation context, it led to

18   ITS America. I think in the Public Safety

19   PSWAC, you know, there was other groups that

20   basically start as advisory groups, or even

21   subgroups of advisory groups and turn into

22   so, I don't think there's necessarily

1   anything legally stopping that, but if there's

2   really no impetus for -- but I know Working

3   Group One is continuing its work because they

4   had things, but if there's a need to continue

5   on a working group and say the work has not

6   terminated, or we need to restart it

7   MR. DOMBROWSKY: Yes. I mean, my

8   only concern is -- again, Tom Dombrowsky,

9   would be because we have federal folks.

10   Industry is more than happy to start up

11   groups. We start up groups every day, but to

12   actually have participation of people that

13   actually know what's going on from the DoD and

14   the federal agencies is where this was so

15   very, very valuable, so that's why I'm a

16   little bit concerned it falls by the wayside.

17   And understand the -- and we also had fatigue,

18   I have to say, big fatigue problem there, too.

19   MR. TENHULA: Right. Dennis, then

20   you, Jennifer.

21   MR. ROBERSON: With Tom preceding

22   me, I really expected he would cover this

1   point, but he didn't, so I will. And this is

2   the role of the working group versus the role

3   of the CSMAC itself.

4   MR. TENHULA: Right.

5   MR. ROBERSON: That became an issue

6   at the end. The working groups said this is

7   it. You can't change it because if you do, the

8   whole thing will fall apart. The CSMAC didn't

9   know what to do with that, quite honestly.

10   MR. TENHULA: Right.

11   MR. ROBERSON: So, that's something

12   we somehow need to clarify up front. And it

13   transcends just that boundary, as well,

14   because you had the subgroups within the

15   working groups who similarly felt that they

16   were in control, and the full working group

17   really didn't have say because they put all

18   their time and energy into it. So, getting the

19   roles of the various parties, which I'll add

20   to this then the role of the NTIA, the role of

21   FCC in this, how since so much of this

22   ultimately has to go to the FCC, getting those

1   roles -- maybe this goes all the way back to

2   our first topic, but it really plays itself

3   out at the end when we're putting together

4   these reports. Who trumps who? And, Fred, you

5   know, with the DoD, in many cases since

6   there's so much spectrum that's related to

7   DoD, often DoD would come in and say well,

8   that's all very nice what you guys did, but

9   this is the way it's got to be because of

10   things that are classified that you can't know

11   about. Well, you know, that's not an entirely

12   satisfying endpoint when you get to writing

13   the report. So, getting that part really

14   clarified I think in the do different/do

15   better side would be an important one, as we

16   go through the next time around, which Mark is

17   enthusiastically supporting.

18   MR. TENHULA: Right. Right.

19   Jennifer, and then we're going to wrap up.

20   And, Bob, I didn't see you there.

21   MS. WARREN: In the interest of

22   time, Jennifer Warren. I want to pick up on

1   Tom's point about commitment. I mean, yes, the

2   liaisons didn't know what they were signing up

3   for, but I'm not sure the co-chairs did. And

4   I really think the resource level of

5   commitment and expertise needs to be

6   highlighted up front, and what sort of

7   administrative support, either NTIA is going

8   to provide, or the co-chairs are going to be

9   expected to provide for things like

10   documentation, report structure, and that sort

11   of thing.

12   And then on Dennis' point, I mean,

13   Working Group Five had the most trouble with

14   the mixed expectations of having a relook at,

15   you know, a year of work, and discussion, and

16   agreement that was open to all of CSMAC. Then

17   being revisited by handful at CSMAC. That was

18   a challenge. And I think when you have a CSMAC

19   structure that is open in this process versus

20   how we do our work which is well understood,

21   we have our working groups, we report up to

22   our CSMAC, CSMAC then debates in full, but

1   those are the closed working groups of CSMAC.

2   And then we have the full discussion. It's

3   very clear there's a delegated, and then

4   reporting up, and a right to review and

5   discuss.

6   This first time effort here, there

7   was not that expectation by those who were

8   working, I think, in all the working groups.

9   And I think addressing that up front rather

10   than, as Greg and Bryan had to deal with the

11   very last minute, would have been enormously

12   helpful. And I don't think there's anything

13   wrong with separate statement, but let people

14   know that if they don't agree, that's the

15   method to address it, rather than

16   MR. TENHULA: Right. Right. Okay,

17   Bob, we're going to -- you have the last word,

18   then we'll turn to the phone and see if

19   anybody else has got final comments.

20   MR. LYON: One quick observation

21   about potential motivation for the ideas that

22   Tom, myself, and Mark have endorsed about

1   furthering this, I may be naive but it's

2   possible that we'll be back here talking about

3   this from 1780 to 1850.

4   MR. HUNTER: Not for 10 years.

5   (Laughter.)

6   MR. LYON: And if you think this

7   was a headache, all those people who are

8   compressing up, I mean, sharing will have to

9   -- I mean, --

10   MR. TENHULA: Thanks for that.

11   (Simultaneous speech.)

12   MR. TENHULA: Thanks for

13 volunteering. Okay. Does anybody on the phone

14 want to talk about the report production or

15 reporting to CSMAC, if they can?

16   Anybody on the phone? Going once,

17 going twice. Are you guys even there? Okay.

18 I'm sorry if we're having technical

19 difficulties and that you're not able to

20 participate, or all you have is music in your

21 ear, so that is a lesson learned.

22   (Laughter.)

1   MR. TENHULA: So, next steps, I

2   mean, I think we appreciate all the inputs

3   here. I think that, again, like I said, our

4   ears and doors will remain open, you know. As

5   we move forward, we don't have a formal next

6   step plan. This is data and information that

7   will go into our strategic planning efforts.

8   This is data and information that will go into

9   deciding what we take on next in this -- with

10   this kind of approach.

11   There are definitely particular

12   bands that I think could benefit from this

13   collaborative approach, so any suggestions on

14   what's next, we can do those offline. And we

15   really appreciate everybody's participation,

16   not only in this event here, but in the

17   working groups themselves.

18   I think I heard several times the

19   R word, resources, which especially on the

20   government side we are in an environment of

21   sequestration at least for now, budgets are

22   tight, time is tight, time is limited, money

1 is limited. This does provide a way to

2 collaborate and maybe save money in the long

3 run, save resources in the long run when we

4 have actual face-to-face meetings and

5 understandings, and information exchanges that

6 are otherwise done in ways that are not

7 productive. So, keep the information coming,

8 keep the ideas coming. We'll use them, and

9 we'll learn from them.

10   So, with that, I'll conclude and

11 we'll reconvene at 1:00 for a CSMAC meeting in

12 this room. And thank you all for

13 participating. With that, goodbye.

14   (Laughter.)

15   (Whereupon, the proceedings went

16 off the record at 11:09:30 a.m.)

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