

**Commerce Spectrum Management Advisory
Committee (CSMAC)
Meeting Minutes**

Time: 9:00 a.m.

Date: May 25, 2011

Place: U.S. Department of Commerce
Herbert C. Hoover Department of Commerce Building
Room 6059
1401 Constitution Avenue N.W.
Washington, DC 20230

Persons Present:

| CSMAC Members | Attended in Person | Attended via Phone |
|--------------------------------|--------------------|--------------------|
| Dr. Larry Alder | X | |
| Dr. David E. Borth | | X |
| Michael Calabrese | X | |
| Dr. Martin Cooper | | X |
| Susan Crawford, Esq. | | |
| Mark E. Crosby | | |
| Thomas Dombrowsky Jr | X | |
| David L. Donovan, Esq. | | X |
| Gary Epstein | | |
| Molly Feldman, Esq. | X | |
| Dr. Brian Fontes (Co-Chair) | X | |
| Dr. Harold Furchtgott-Roth | X | |
| Mark Gibson | X | |
| Dale Hatfield | | X |
| Dr. Kevin Kahn | | |
| Doug McGinnis | X | |
| Dr. Mark McHenry | X | |
| Janice Obuchowski, Esq. | X | |
| Dr. Robert Pepper | | X |
| Carl Povelites | X | |
| Richard Reaser, Jr. | X | |
| Dennis Roberson | | |
| Dr. Gregory Rosston (Co-Chair) | X | |
| Dr. Charles Rush | X | |
| Dr. Daniel Stancil | | X |
| Tom Sugrue, Esq. | X | |
| Bryan Tramont, Esq. | X | |
| Jennifer Warren, Esq. | X | |

| NTIA Agency Employees | Title |
|------------------------------|--|
| Lawrence E. Strickling | Assistant Secretary of Commerce for Communications and Information |
| Karl Nebbia | Associate Administrator, NTIA Office of Spectrum Management |
| Bruce M. Washington | CSMAC Designated Federal Official |

| Presenter | Title |
|------------------|---|
| Karl Nebbia | Associate Administrator, NTIA Office of Spectrum Management |

| Visitors | Affiliation |
|------------------|---------------------------------------|
| Michelle Creaser | Lockheed-Martin |
| Jeff Marks | Alcatel-Lucent |
| Bob Hirsch | Alcatel-Lucent |
| Charla Rath | Verizon |
| Steve Sharkey | T-Mobile |
| Audrey Allison | Boeing |
| Mary Gresham | FTI |
| Brian Scarpelli | TIA |
| Wesley Gee | TIA |
| Joe Gattuso | NTIA |
| Ed Drocella | NTIA |
| Rochelle Cohen | NTIA |
| Tim Cooney | Wilkinson, Barker, Knauer |
| Craig Gilmore | Wilkinson, Barker, Knauer |
| Trey Forgety | National Emergency Number Association |
| J.H. Snider | iSolon.org |

** Other federal employees and members of the press and public were also in attendance.*

Action Items Arising from Meeting Discussion:

| Action | Lead(s) | Deadline |
|--|---|-----------------|
| Search for 500 MHz Subcommittee provides Industry Options | Gary Epstein and Carl Povelites | July 25, 2011 |
| Spectrum Sharing Subcommittee identifies critical questions | Larry Alder and Mark McHenry | July 25, 2011 |
| Unlicensed Subcommittee identifies critical questions | Michael Calabrese and Janice Obuchowski | July 25, 2011 |
| Spectrum Management Improvement Subcommittee identifies critical questions | Mark Gibson and Bryan Tramont | July 25, 2011 |
| Assign next question at mid-term meeting | Co-Chairs | July 25, 2011 |

Discussion Items (Per Agenda): Attachment 1

Welcome and Opening Remarks

Larry Strickling called the meeting to order at approximately 8:59 a.m. (EDT), welcomed everyone, and introduced the new CSMAC Designated Federal Official Bruce Washington. In addition, Mr. Strickling also introduced the new Co-Chairs Dr. Brian Fontes and Dr. Gregory Rosston. Mr. Strickling turned the meeting over to the Co-Chairs. Dr. Fontes requested that each member and visitor introduce themselves around the room. After the introductions, Dr. Fontes turned it over to Mr. Nebbia to go through the discussion of the work areas.

Work Area, Structure and Work Method (Karl Nebbia) – Mr. Nebbia mentioned at the close of the last sequence (meeting) the committee desired to examine its work methodology for specified work areas. In addition, Mr. Nebbia stated the importance for how the work products will be used. He outlined the four areas of interest predicated from the President's own initiative:

1. Looking for 500 MHz of Available Spectrum.
2. Spectrum Sharing
3. Unlicensed Spectrum
4. Spectrum Management Improvements

Mr. Nebbia expressed the desire to change the approach we took in previous endeavors. Instead of just examining general top areas, come back in six months with a long report and talk about the topic in general terms, it (process) would be more useful to try to specify some questions, set shorter time frames, and focus the specified recommendation(s). The process would entail setting up working groups based around each of the subject areas. Each working group would identify each question(s) in the preceding CSMAC for the next regularly scheduled meeting. He stated NTIA is not absolutely tied to the slate of questions but there were specific questions we needed to be addressed. Based on the questions, NITA required succinct recommendations. The goal of the recommendation deliberations is to have an impact on our (NTIA) decision process at the end of September. In order to get started quickly, some members were asked if they were willing to co-chair one of the working groups. Meeting expectations for the subcommittees (working groups) were established and Mr. Nebbia proceeded to transition to the first subject area with a presentation.

Looking for 500 MHz of Available Spectrum - Mr. Nebbia explained how NTIA was working with a group called the Policy and Plans Steering Group that meets through a personal spectrum working group approximately once a month. Each agency represented in the group was asked to look at its use of spectrum. The PPSG meets as a whole every two and three months. This process enables each agency to vet its input on possible relocation from the band, transitions concerns, cost, and operational anomalies. Our intent is to know what direction we are heading.

Mr. Nebbia gave an overview how the 1755 to 1780 band was used in the government. He stated that little over 3,000 assignments were in this band. Fixed point-to-point actually represented the greatest number of assignments. With the move out of the 1710 to 1755 band, links with channels in both lower bands, we will be able to move them all entirely out to another

band. Mr. Nebbia highlighted the operations with mobile video surveillance. Later, he focused on the remote land mobile robotics. He closed out the section with discussion on unmanned aerial vehicles and systems. The group participated in general discussions surrounding the band. Mr. Nebbia presentation concluded, and the group took a look at the various groups and remaining questions.

Spectrum Sharing - There was a call for co-chairs. Mr. Larry Alder and Mark McHenry accepted co-chair positions. The group members exchanged discussion related to sharing unlicensed and white spaces, spectrum below three and four gigahertz, interference, sharing arrangements and test bed results. Some members expressed concerns on how enforcement is done in terms of remedying the interference, certain protocols and leveraging interference as a competitive tool. Larry Alder feared that spectrum sharing has an abstract concept that has been batted around before. He (Alder) recommended coming up with some questions that were more specific. He expressed the group should spend the appropriate time to really define the question. Moreover, the group's general consensus was to identify specific bands that they may want to take a look at with the issue of sharing.

Unlicensed – Mr. Nebbia introduced “Unlicensed” (spectrum) as the next agenda item. He stated that a good bit of work had gone in this area before but several areas had not been answered in the last deliberation. The issue of enforcement was called out, particularly because enforcement for unlicensed (spectrum) can be a different issue than general enforcement. The question of dedicated bands popped up in FCC's broadband plan, which suggested as much as hundred megahertz or something be set aside. It was noted that some bands were believed to be unlicensed actually had license services in them also. The committee acknowledged the lack of database for unlicensed spectrum and the difficulty to track them. Mr. Nebbia explained that the bills on the table had something related to having a database of some sort. Mr. Hatfield injected the possibilities of receiver standards were mentioned in the legislation. Mr. Nebbia reminded the group that receiver standards were an issue for unlicensed, but it was also an issue for licensed systems. It was noted that was not really a problem, except for with GPS right now. Mr. Calabrese offered the question if there were variations of unlicensed that could be suitable for Federal use. He gave the example of light licensing in the 3650 to 3700 band. He proposed considering variations in unlicensed bands. The issue of interference was discussed and how it would need to be governed. Just chasing the interference down would be a very big issue.

Spectrum Management Improvements - Dr. Fontes introduced the next topic for discussion and referenced the GAO report. Mr. Nebbia stated that some of the questions to examine were directly from the report. He acknowledged NTIA was working to improve its automation capabilities. NTIA would first have to increase its data pool than currently on-hand. The data must be current and correct with different beginning points. The question came up whether the Commission (FCC) would have to do rule makings to update all the bands they are involved in. Mr. Nebbia agreed it would have to come from both sides (NTIA and FCC). Mr. Reaser energized the discussion by illustrating types of useful data fields and data fields we do not need any longer. He stated that Raytheon no longer build radios that have a data source, a modulator, and the power-out for an antenna. He mentioned the company uses a computer, direct digital modulation to a TR module that is phase-shifted. In order to address the concerns of the group, Mark Gibson and Bryan Tramont were named co-chairs of the committee. Mr. Tramont mentioned the GAO report talked about examining the five-year Senate Review Process. Mr. Nebbia conveyed that it was part of the data accuracy process. Ms. Warren suggested importance of including the “right data to support the compatibility analysis” right up there with data accuracy. Likewise, Mr. Dombrowsky suggested to

the group that “verification of data” be added as well. It was affirmed that the subcommittee co-chairs would address the concerns of the group in its next report. Mr. Nebbia reviewed the subcommittees’ participation list and encouraged the membership to sign up for as many groups as possible.

Public Comment – Mr. Nebbia noted the time and transitioned to the next agenda item (Public Comment). Dr. Fontes resumed the facilitation of the CSMAC and officially opened the meeting for public comment. Mr. Jim Snider and Mr. Kilbourne provide comments. Assistant Secretary Strickling provided a response to the public comments.

Next Meeting Announced – The next meeting was announced for July 27, 2012.

Adjournment – Co-chair Dr. Fontes adjourned the meeting at approximately 11:47 a.m.

Certified by the Designated Federal Official



Date: *July 27, 2011*
Bruce M. Washington
Designated Federal Official