Minutes of the
U.S. Department of Commerce
Commerce Spectrum Management Advisory Committee
April 30, 2008

Meeting Date and Time:

April 30, 2008, 1:30 PM

Location:

Herbert C. Hoover Department of Commerce Building
1401 Constitution Ave. NW, Room 1092 (IRAC Room)
Washington, DC 20230

Committee Members in Attendance:
Dale N. Hatfield (Co-chair), Bryan Tramont (Co-chair), Martin Cooper (by phone), Mark E. Crosby, Dr. David Borth, Alexander H. Good (by phone), James B. Goldstein (by phone), Robert M. Gurss, John Hoadley, Dr. Kevin C. Kahn, Dr. James Andrew Lewis, Dr. Mark A. McHenry, Darrin M. Mylet, Janice Obuchowski, Mark Tucker, R. Gerard Salemme, Jennifer Warren (by phone).

NTIA Staff:
Meredith Baker, Acting Assistant Secretary for Communications and Information
Karl Nebbia, Associate Administrator, Office of Spectrum Management
Eric Stark, Associate Administrator, Office of Policy Analysis and Development
and Designated Federal Officer
Joseph L. Gattuso, Committee Liaison
Byron Barker, Chief, Office of Strategic Spectrum Planning & Reform Division
Edward F. Drocella, Chief, Spectrum Engineering and Analysis Division

Public Attendance:
The meeting was also attended by approximately 20 other government employees and members of the public and press.

Meeting Agenda:

Call to Order.
Co-Chair Dale Hatfield called the meeting to order and introduced Acting Assistant Secretary for Communications and Information Meredith Baker to make opening remarks.

1. Remarks by Acting Assistant Secretary Baker.

Acting Assistant Secretary Baker welcomed the attendees and thanked the committee members for their attendance and participation.

2. Discussion of Recommendations of the Federal Strategic Spectrum Plan.

Byron Barker, Chief of the Strategic Spectrum Planning & Reform Division at NTIA, gave a presentation on the Federal Strategic Spectrum Plan. He said it was designed in part to provide transparency and understanding in the way the federal government uses spectrum, and that it achieved this goal by synthesizing reports from multiple government agencies to provide a coherent overview of federal spectrum use.

Mr. Barker highlighted the plan's two main sections: the executive summary and a more detailed appendix section. The executive summary, he said, lays out goals and objectives regarding spectrum use, mainly with respect to the introduction of newer technology alongside legacy systems, resulting in an overall federal strategy. The appendix, he said, breaks out the various communication services and how each federal agency has used spectrum. Mr. Barker said that in the near term, the focus is on using commercial sector technologies which generally provide faster availability at lower cost; in the mid-term, the goal shifts to implementation of new technologies and a greater degree of information and spectrum sharing between public entities; finally, in the long term, the objective is a comprehensive national spectrum plan that takes into account the interests of all stake holders, public and private.

In response to a question from Co-chairman Bryan Tramont, Mr. Barker explained that the next step is the implementation of the plan, as well as continuous refinement and improvement of the plan.

3. Status Reports for Committee Tasks

a. Spectrum Efficiency Task (Working Group 1)

Dr. Kevin Kahn said that Working Group 1 had begun work on a paper regarding spectrum efficiency and a taxonomy regarding relative efficiency for different types of devices, be it radar, radio astronomy, or land mobile. He said that the group is open to suggestions regarding the direction the paper should take. Dr. Kahn explained that some systems, such as land mobile, have a great deal of available information about spectrum efficiency, while others, such as radar, have scant information, due in part at least to security issues regarding military radar. Jennifer Warren offered to provide information regarding radar usage.

Janice Obuchowski agreed with the development of a taxonomy, saying that it is a thread that goes through the other tasks. Co-Chair Tramont asked whether the paper focused solely on federal use of spectrum or overall spectrum use, to which Dr. Kahn responded that the group had not specifically dealt with that issue, but with the exception of a few minor cases such as military radar, information gathered regarding federal use could be applied in civilian contexts, and vice versa. Ed Drocella, Chief of Spectrum Engineering and Analysis Division (SEAD), NTIA, explained that his division has been working on developing metrics for radar usage and the report should be available by the end of 2008.

Dr. Kahn said that talking about efficiency suggests a simple metric such as bits per hertz per square meter, but that a public safety user who has to maintain communications over 99.9% of land, for example, may be more concerned about coverage area. He said that you have to think about efficiency at an economic level, which is related to the coverage aspect, or you have to say efficiency isn't the entire answer. Jennifer Warren said that they also need to address effectiveness because, to use the taxonomy idea, it is to recognize that there are different services and different allocations, and they aren't all measured in the same way, even if you just stick to the efficiency standard. Co-chair Hatfield said that they had traditionally looked at the difference between noise limited systems and interference limited systems, and that they could provide an additional level of detail.

There was discussion among Co-Chairman Hatfield, James Lewis, and Janice Obuchowski about qualitative and quantitative measures of efficiency.

Dr. Kahn said that it is difficult to measure spectrum efficiency when individual applications are so diverse. Martin Cooper indicated that if a single situation was tracked over time a clear change in efficiency could be seen, and similarly comparing like situations at the same point in time could reveal differences in efficiency. Mr. Barker said that the Department of Defense uses a system known as the Spectrum Scorecard which might be of use to the Working Group's task.

Co-Chairman Tramont requested that a draft of Working Group One's report be ready by the July meeting of CSMAC.

b. Completion of Spectrum Sharing Analysis and Preparation of Recommendations for Streamlining Federal/non-Federal Sharing (Working Group 2)

Robert Gurss said that the goal was to get a draft paper by the July meeting, and that the working group had had a series of conference calls about the draft. He said that the report would list ideas on sharing, including transparency, getting information to the public, and NTIA spectrum management processes. Other issues include state and local or regional coordinators who would be a point of contact and uniformity in the application process. Mr. Crosby added that NTIA staff had raised the issue of sharing systems versus sharing spectrum, and that he learned that NTIA staff was collecting templates on agreements and MOU's to help sharing. Janice Obuchowski said that the trust factor is important, and she supported having a section on enforcement. Co-Chairman Tramont agreed. He also asked for information about the eligibility of federal agencies to lease spectrum under the FCC's secondary market rules, which Mr. Crosby reviewed. Mr. Nebbia spoke about agencies jointly planning systems. Mr. Hoadley said he saw some opportunities between this group and WG 4, on efficiency.

Co-Chairman Hatfield posed a question on which rules govern, which was discussed among the members.

Mr. Nebbia commented on issues in the report pertaining to joint planning, and experimental use of spectrum. In response to a question from Ms. Warren about databases, Mr. Nebbia

explained that there are two separate data entry points, the automated 70-80-90 GHz process and the web-entry point for data on applications.

c. Improving the Process of Identifying Potential Spectrum for Future Reallocation (Working Group 3)

Co-Chairman Tramont said that in crafting its recommendations, Working Group 3 studied four pieces of legislation regarding spectrum reallocation: the Omnibus Reconciliation Act of 1993, the Balanced Budget Act of 1997, the Strom Thurmond National Defense Act of 1999, and the Commercial Spectrum Enhancement Act of 2002 (CSEA). The working group also analyzed two practical experiences with spectrum reallocation and sharing: relocation on the AWS bands, and sharing on the 70/80/90 GHz millimeter wave bands. He said that in Boulder the Committee decided not to limit this work to reallocation, so the paper will also cover sharing. He said that some lessons learned include that Congress has at times mandated spectrum allocations, but not always based on a clear demonstration of commercial need, and that CSEA represents a vast improvement. He noted that some federal agencies are hesitant to lease spectrum to commercial entities out of fear that those commercial entities will end up as squatters on the federal agency's spectrum. Also, he voiced concerns that government agencies lacked sufficient staffing to implement CSEA, which led to delays and frustrations in the reallocation process.

The working group came up with a list of recommendations for the draft report. The first, he said, is that future reallocations should only be mandated on a showing of need. Another is that the reallocation system be clearly defined and consistently applied. Third, there should be information disseminated prior to the auction so that people know the technical needs of the incumbents. He said that the DOD portal might be a model and also that there is consensus that the 70/80/90 GHz coordination process works well. Fourth, he said that centralization of reallocation efforts, at least within each agency (if not for the entire federal government) and standardization of protocols would help to facilitate reallocation. Fifth, the draft report notes that some of the $19 billion revenue from the auction could be used to hire more staff to meet the demands of CSEA. Sixth, he proposed setting interim benchmarks for spectrum clearing to improve transparency and predictability into which areas of spectrum would be available when. Finally, he offered several possible means of incentivizing reallocation, including allowing for non-mandatory negotiations or providing a premium for those users who cleared out of spectrum early.

Mr. Nebbia said that incentive programs for agencies to receive additional funding to vacate spectrum early raised appropriations issues. He also commented that the interim benchmarks must be defined in such a way to allow them to be used effectively by the parties involved.

There was discussion of possible difficulties surrounding payment for early vacating of spectrum. Acting Assistant Secretary Baker commented that having incentive money come from the federal government rather than commercial buyers reduces the appearance that the money is somehow a gift to the agency. She asked how commercial users deal with classified systems. Mr. Nebbia and Co-Chairman Tramont explained that often even when information regarding federal government use is not classified, it is still exempt from

Freedom of Information Act requests, and the lack of information was often discouraging to commercial entities.

After further discussion, Co-Chairman Hatfield called a break before moving to the next agenda item.

d. Transition of Federal Land Mobile Radio Systems to Increase Spectrum Efficiency (Working Group 4); Acceptance of Report Prepared by Subcommittee on Technical Efficiency, "Opportunities for Government Adoption of Commercial Technologies"

John Hoadley presented a paper regarding government adoption of commercial technologies. He said that after the Boulder meeting incorporated suggestions received from a representative of Ericsson. He said that there was some concern that the paper might not have incorporated all edits, and that the Committee could accept the current paper as is, or wait and include more focused information on specific technologies. Dr. Kahn said that the more detailed information was readily available in the public domain, and given the rapid advance of technology, some of that information would even be obsolete shortly after publication, and suggested that the paper be submitted as is.

After discussion among the members, Dr. Kahn moved to have the paper accepted, and the motion passed unanimously.

Mr. Hoadley said that Working Group 4 is now focusing on the transition of federal land mobile radio systems to increase spectrum efficiency. He briefly summarized the outline the group had put together which would form the foundation of a later paper, including a survey of the overall issue, followed by a discussion of possible technological solutions to spectrum efficiency, and finally an overview of the challenges to a transition. Mr. Hoadley closed by saying that Working Group 4 needed contributions from various members as they moved forward.

e. Implementation of OMB Circular A-11 (Working Group 5)

Ms. Obuchowski reviewed Working Group 5's draft report, which was to provide recommendations associated with implementation of OMB Circular A-11, which urges government agencies to consider the economic value of the radio spectrum.

She said that the draft was in part educational. She said that economic valuation can be highly dependent on context and this presents opportunities as well as challenges. It's hard to generate a baseline, she said, given that a relatively small amount of the overall spectrum has gone through a market-based process. Second, she said that while some government tasks have analogs in the private sector which allow for price comparisons, other government missions, specifically military and homeland defense, have no comparable situation in the commercial use of spectrum. Next, market fluctuations exist in the spectrum market as with any other industry. Finally, she said, there are questions regarding how to foster secondary market mechanisms and behaviors in the federal spectrum arena.

She said that the draft includes proposals for recommendations, one being to derive a generic spectrum valuation index. Ms. Obuchowski recommended that test case scenarios be examined further, and that a best practices document be created from those experiences. She also suggested that looking at how the private sector values spectrum could help in the valuation of federally used spectrum, though she noted that most commercial uses are based on systems where the operating band is identified, whereas some federal government uses, especially in the defense context, develop systems that are deployed in situations where the band is not identified. Another part of the paper is lessons learned from the UK AIP experience.

Co-chairman Tramont asked what agencies were currently doing to come into compliance with A-11. Ms. Obuchowski noted the Department of Defense's spectrum scorecard, but said some agencies have failed to do anything as they lack understanding or guidance on how to price their spectrum, while still other agencies have refused to act out of resistance to the pricing scheme.

Co-Chairman Hatfield asked how to differentiate between an application that is not easily valued versus comparing system designs that use varying amounts of spectrum and how one makes the decision of which to implement. Co-Chairman Tramont said he thought that one role of A-11 was to calculate the comparative cost to the public between systems with spectrum having a financial value so one can choose the system with the least net cost to the public.

Mr. Lewis said that valuation can be tricky and we were valuing spectrum, not agency missions. He said that for most goods, value is the price determined by the market; the value of your house is not what you think it is worth, but what someone will offer for it, and that his impression is that OMB wanted a dollar figure. Ms. Obuchowski recommended getting clarification from OMB.

There was additional discussion among Committee members about value of spectrum, price pressure points, fees versus A-11, and the effects on agencies. Co-Chairman Hatfield said that it would be unfortunate to pull back from A-11, and that they should consider value even if it is a difficult problem.

Dr. Kahn observed that the question was about spectrum versus other expenditures and that the trade off is a tool an agency can use like other tools. Eric Stark agreed, but noted that the trade offs are between competing spectrum systems. Mr. Gurss said that using dollars and spectrum valuation is a crutch, and that agencies could score spectrum use. Mr. Hoadley asked what the incentive would be to get off antiquated and old systems. Actually charging a dollar value would provide an impetus for an agency to upgrade its technology and use spectrum more efficiently. Acting Associate Administrator Baker said that is a suggestion for auditing and fits nicely into some of the other pieces of the puzzle.

Ms. Obuchowski said that she looked forward to further feedback from the members.

Mr. Nebbia said that agencies were waiting for feedback. Ms. Obuchowski said that the bottom line is that it becomes an administrative price. Mr. Lewis added that A-11 was a watershed and now we are on the other side.

Acting Assistant Secretary Baker agreed and reemphasized that the work is groundbreaking.

f. Acceptance of Report from Subcommittee on Operational Efficiencies

Due to time constraints and some late comments being made on the paper, Chairman Hatfield tabled the formal acceptance of the report until the next meeting.

4. Date and Place of Next Meeting

Co-chairman Tramont proposed setting the schedule for the next meeting. After discussion, Chairman Tramont announced the next meeting would take place on Monday, July 14th, at approximately 1:30, in San Jose.

5. Public Comment Period

Co-chairman Hatfield asked if there were any comments from the public, but none were made.

6. Adjournment

Co-chairman Hatfield adjourned the meeting.

Respectfully submitted,

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Date:

Eric Stark
Designated Federal Officer

I hereby certify that these minutes of the April 30, 2008 Commerce Spectrum Management Advisory Committee are true and correct to the best of my knowledge.

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Date:
Dale N. Hatfield
Co-Chair

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Date:
Bryan Tramont
Co-Chair