

## NTIA FACT SHEET ON SPECTRUM PLAN AND TIMETABLE, FAST TRACK EVALUATION

*“America's future competitiveness and global technology leadership depend, in part, upon the availability of additional spectrum. The world is going wireless, and we must not fall behind....”*

*Expanded wireless broadband access will trigger the creation of innovative new businesses, provide cost-effective connections in rural areas, increase productivity, improve public safety, and allow for the development of mobile telemedicine, telework, distance learning, and other new applications that will transform Americans' lives....”*

*This new era in global technology leadership will only happen if there is adequate spectrum available to support the forthcoming myriad of wireless devices, networks, and applications that can drive the new economy. To do so, we can use our American ingenuity to wring abundance from scarcity, by finding ways to use spectrum more efficiently. We can also unlock the value of otherwise underutilized spectrum and open new avenues for spectrum users to derive value through the development of advanced, situation-aware spectrum-sharing technologies.”*

- President Obama, June 28, 2010

### **Summary of the two DOC/NTIA reports**

#### **1) A Ten-Year Plan and Timetable to make 500 megahertz of Federal and non-Federal spectrum available for wireless broadband use.**

The Department of Commerce's (DOC) National Telecommunications and Information Administration (NTIA), in collaboration with the Federal Communications Commission (FCC) and other Federal agencies, prepared a Plan and Timetable that: 1) identifies an initial list of candidate spectrum bands; 2) outlines steps to determine additional candidate bands; 3) sets a process to assess and evaluate their feasibility; and 4) identifies actions necessary to make that spectrum available for wireless broadband use within a decade. The Plan and Timetable identify over 2,200 megahertz of Federal and non-Federal spectrum that will be evaluated for potential opportunities for wireless broadband use. (See attached table.)

NTIA prepared the report pursuant to the June 28, 2010 Presidential Memorandum that directed the Secretary of Commerce, through NTIA, to collaborate with the FCC to produce a ten-year plan and timetable for making available 500 megahertz of Federal and non-Federal spectrum suitable for wireless broadband use, while taking into account the need to ensure there is no loss of existing critical government capabilities and the need for appropriate enforcement mechanisms and authorities.

#### **2) Fast Track Evaluation of the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 MHz, and 4200-4220 MHz and 4380-4400 MHz bands.**

NTIA, at the request of the Office of Management and Budget, the National Economic Council, and the Office of Science and Technology Policy, and in collaboration with the FCC and other Federal agencies, performed a “fast track” review of some of these bands to determine whether any spectrum could be made available for wireless broadband within five years. NTIA identified

and evaluated four bands for this review: 1) 1675-1710 MHz; 2) 1755-1780 MHz; 3) 3500-3650 MHz; and 4) 4200-4220 MHz and 4380-4400 MHz. NTIA recommends that 115 megahertz (1695-1710 MHz and 3550-3650 MHz) be made available for wireless broadband in the next five years, contingent upon timely allocation of funds. This is an important down payment on the Administration's commitment to address the growing demand for wireless broadband services. The evaluation of the 1755-1780 MHz band could not be completed by an October 2010 deadline for identifying the initial tranche of spectrum. This band will continue to be a priority for analysis in the Plan and Timetable.

### **Ten-year Plan and Timetable for 500 megahertz**

NTIA has identified 2,200 megahertz of spectrum to evaluate for wireless broadband opportunities, including the four fast-track bands, as candidate bands for review. The report provides a roadmap for identifying wireless spectrum assigned to both Federal and non-Federal users that can be allocated for wireless broadband, as well as for using all spectrum more efficiently.

#### **Review Mechanisms:**

- NTIA will work in collaboration with the FCC to consider Federal, shared, and non-Federal bands for potential commercial broadband use.
- NTIA will prioritize the candidate bands for analysis based on a variety of factors including how the band is currently being used, industry interest, relocation cost for Federal users, and the likelihood that the band can be repurposed within ten years. The highest priority bands will be evaluated first.
- NTIA will convene the Policy and Plans Steering Group (PPSG) to perform the evaluations of the candidate bands.
- In order to reach the 500 megahertz goal as rapidly as possible, bands will be reviewed on a rolling basis. The recommendations will be released as the review of each band is completed.
- The U.S. Chief Technology Officer, working in cooperation with NTIA and the PPSG, will undertake reviews of agencies' spectrum usage to ensure that the Federal Government utilizes spectrum most effectively.
- NTIA will also solicit contributions from the Commerce Spectrum Management Advisory Committee on how best to execute the mandate of the President's Spectrum Initiative. NTIA will also explore whether other mechanisms for public input and technology development can inform and improve our Federal system of spectrum management.

#### **Providing incentives and assistance to agencies:**

- DOC/NTIA state in the Plan and Timetable that the Administration intends to propose improvements to the Commercial Spectrum Enhancement Act, particularly focusing on the need to provide agencies with the funding to plan for relocation and the need to provide agencies with greater flexibility in applying resources from the Spectrum Relocation Fund.
- The Administration will need to allocate funds to support planning efforts. The funding could be used to test the feasibility of alternative spectrum, evaluate the use of different technologies, and undertake any other necessary planning efforts, thereby creating more certainty as to what new spectrum will be (and when it could be) made available.

- DOC/NTIA note in the Plan the Administration's support for legislation to authorize voluntary incentive auctions as an approach that provides incentives and assistance for repurposing commercial spectrum.

### **The Fast Track Evaluation**

NTIA conducted an accelerated analysis of four bands to determine whether any portion of the bands can be made available within five years for wireless broadband.

- 1) **1675-1710 MHz** – This band is currently used for radio transmitters on weather balloons and similar systems, and downlinks from weather satellites. Many agencies, public safety organizations, and radio and television stations receive and use this information.

**Recommendation:** DOC/NTIA recommend that a portion of the band, 1695-1710 MHz, be made available, while protecting critical government sites via exclusion zones. The exclusion zones will help minimize, but not eliminate, the impact to meteorological services from making spectrum available for commercial use.

- 2) **3500-3650 MHz** – The Department of Defense (DOD) currently uses this band for a variety of tactical high-power radars. Many of these radars operate on ships. Other systems in this band operate in DOD training areas and test ranges.

**Recommendation:** DOC/NTIA recommend that a portion of the 3550-3650 MHz band be made available for wireless broadband, by licensing it for broadband use outside certain coastal areas and test and training areas. These geographic limitations will ensure the commercial use is protected from interference from DOD operations. This approach will make available spectrum covering a significant area of the country while permitting DOD to continue to meet mission and training requirements.

- 3) **4200-4220 MHz and 4380-4400 MHz** – These band segments are part of the 4200-4400 MHz band that is used worldwide for radio altimeters on aircrafts.

**Recommendation:** DOC/NTIA recommend NTIA further review these band segments to explore to what extent radio altimeters operate in these particular band segments. NTIA recognizes that, due to the need for international regulatory action by the International Telecommunication Union and the International Civil Aviation Organization, these 40 megahertz of spectrum cannot be made available for broadband use in the United States before 2016. However, the U.S. Government will initiate the necessary action now to obtain international approvals for reallocating this spectrum by 2016.

- 4) **1755-1780 MHz** – This band is currently used by DOD, Federal law enforcement agencies, and other agencies for a variety of satellite, surveillance, aeronautical operations, fixed microwave and other operations.

**Recommendation:** Given the number of Federal users in the band, the diversity of Federal uses, and the need to find replacement spectrum for operations that would have to be relocated from the band if it were to be made available for wireless broadband, DOC/NTIA could not complete a rigorous review of this band by October 2010. This band will continue to be a priority for analysis under the Plan and Timetable.

## Next Steps

- **Funding for Planning and Redesign** – Making the 1695-1710 MHz and 3550-3650 MHz band available for wireless broadband will require timely allocation of funding for affected Federal operations to engage in planning, and in some cases to make changes to their operations and redesign their equipment. For example, the National Oceanic and Atmospheric Administration (NOAA) would need to redesign the next generation of geostationary meteorological satellites to move all communications below 1695 MHz or develop an alternate communications method which recognizes current reliability and availability requirements. Also, NOAA will need to redesign radio transmitters used on weather balloons and similar systems to use spectrum more efficiently to make room for satellite downlinks.
- **Reallocation Rulemakings** – The FCC must conduct rulemakings in order to implement NTIA's recommendations.

## Background

- As historical context, NTIA reallocated approximately 225 megahertz for non-Federal use in February 1995. NTIA started that effort in August of 1992 at the direction of Congress. The FCC auctioned a portion of that spectrum, the 1710-1755 MHz band, in 2006, and the spectrum is still in transition as agencies relocate their operations. Making available 500 megahertz represents an even greater challenge as spectrum use by both Federal and non-Federal users has increased.
- NTIA serves as the executive branch agency principally responsible for advising the President on telecommunications and information policies. NTIA also manages the Federal use of spectrum and formulates and establishes plans and policies that ensure the effective, efficient, and equitable use of the spectrum both nationally and internationally.

## Initial Band Candidates that NTIA and the National Broadband Plan Identified

Frequency Band (MHz)	Amount (Megahertz)	Current Allocation/Usage (Federal, Non-Federal, Shared)
(Broadcast TV)** VHF/UHF Frequencies	120	Non-Federal
406.1-420	13.9	Federal
(D-Block)** 758-763 788-793	10	Non-Federal
1300-1390	90	Federal
(MSS)** 1525-1559 1626.5-1660.5	40	Non-Federal
(MSS)** 1610-1626.5 2483.5-2500	10	Non-Federal
1675-1710*	35	Federal/non-Federal Shared
1755-1780*	25	Federal
1780-1850	70	Federal
(AWS 2/3)** 1915-1920 1995-2000	10	Non-Federal
(MSS)** 2000-2020 2180-2200	40	Non-Federal
(AWS 2/3)** 2020-2025	5	Non-Federal
(AWS 2/3)** 2155-2180	25	Non-Federal
2200-2290***	90	Federal
(WCS)** 2305-2320 2345-2360	30	Non-Federal
2700-2900	200	Federal
2900-3100	200	Federal/non-Federal Shared
3100-3500	400	Federal/non-Federal Shared
3500-3650*	150	Federal
3700-4200	500	Non-Federal
4200-4400	200	Federal/non-Federal Shared
[4200-4220 & 4380-4400]*		Federal/non-Federal Shared
<b>Total</b>	<b>2263.9</b>	

\* Bands selected for Fast-Track evaluation

\*\* Identified in the National Broadband Plan, Recommendation 5.8, page 86 (using nomenclature contained in Exhibit 5-E)

\*\*\* NTIA notes the ITU-R SA.1154 Recommendation