

First Interim Progress Report on the Ten-Year Plan and Timetable



U.S. Department of Commerce

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1. Introduction

The National Telecommunications and Information Administration (NTIA) submits this Progress Report pursuant to the Presidential Memorandum issued on June 28, 2010, which directed the Department of Commerce, working with the Federal Communications Commission (FCC), to identify and make available 500 megahertz of spectrum over the next ten years for expanded wireless broadband use.¹ Since the issuance of the Presidential Memorandum, NTIA has completed two initiatives in support of the 500 megahertz goal, while the FCC has initiated several rulemakings. President Obama also has proposed the Wireless Innovation and Infrastructure Initiative that reiterates the Administration's support for freeing up 500 MHz of spectrum for commercial purposes through voluntary incentive auctions and more efficient use of government spectrum.²

NTIA, with input from the Policy and Plans Steering Group (PPSG)³, produced a Ten-Year Plan and Timetable⁴ (hereafter referred to as the Plan) to meet the President's 500 megahertz goal. The Plan, dated October 2010, identified steps to determine candidate bands, to assess their feasibility, and to identify the actions necessary to make spectrum available for broadband wireless services. The Plan also described the processes and timetable for executive branch actions in support of the Administration's goal. Fully implemented, the Plan requires consideration of a number of factors, including technical and operational considerations of Federal systems and non-Federal broadband wireless systems, the costs to evaluate and implement sharing methods or relocate Federal systems, and the identification of comparable spectrum for relocating an incumbent system. The Plan also takes into account the Presidential Memorandum's statement that "the plan and timetable must take into account the need to ensure no loss of critical existing and planned Federal, State, local, and tribal government capabilities, the international implications, and the need for enforcement mechanisms and authorities."⁵

¹ Memorandum for the Heads of Executive Departments and Agencies, Unleashing the Wireless Broadband Revolution, (Presidential Memorandum), released June 28, 2010, 75 Fed. Reg. 38387 (July 1, 2010), available at <http://www.whitehouse.gov/the-press-office/presidential-memorandum-unleashing-wireless-broadband-revolution>.

² "President Obama Details Plan to Win the Future through Expanded Wireless Access," fact sheet (Feb. 10, 2010), <http://www.whitehouse.gov/the-press-office/2011/02/10/president-obama-details-plan-win-future-through-expanded-wireless-access>. The wireless initiative also seeks to provide at least 98% of Americans with access to 4G high-speed wireless service, spur innovation through investments in research and development, and develop a nationwide, interoperable wireless network for public safety. *Id.*

³ The Policy and Plans Steering Group, an advisory group of senior, political-level Federal officials advising the NTIA Administrator on spectrum policy and strategic plans, serves as a forum for issue resolution and harmonization as determined by the NTIA Administrator. The PPSG has advised the Assistant Secretary regarding the Fast Track bands as well as the Ten-Year Plan and Timetable. See Presidential Memorandum, Section 1(c).

⁴ National Telecommunications and Information Administration, *Plan and Timetable to Make Available 500 MHz of Spectrum for Wireless Broadband* (November 15, 2010), available at http://www.ntia.doc.gov/reports/2010/TenYearPlan_11152010.pdf.

⁵ See Presidential Memorandum at § 1(b), 75 Fed. Reg. at 38388.

Concomitant with the preparation of the Plan, NTIA and the Federal agencies performed a Fast Track Evaluation, to determine by October 1, 2010, if any of four selected spectrum bands could be made available for wireless broadband use within five years.⁶ If NTIA determined that it was not possible to repurpose an evaluated band by that date, that spectrum band would remain under consideration for the Plan.

As a result of the Fast Track Evaluation, NTIA has already made substantial progress in identifying spectrum for repurposing. Specifically, the Fast Track Evaluation recommended:

- making available 15 megahertz of spectrum from 1695-1710 MHz;
- making available 100 megahertz of spectrum between 3550-3650 MHz subject to certain exclusion zones; and
- studying 40 megahertz (in two 20 megahertz bands) of spectrum within 4200 and 4400 MHz for possible repurposing and recommending a proposed agenda item for the World Radiocommunication Conference (WRC) 2016 to consider this spectrum for wireless broadband.

This report documents the actions and accomplishments in the execution and implementation of the Plan and summarizes the actions to date on the Fast Track Study. It covers the period from October 1, 2010 through March 31, 2011.

⁶ National Telecommunications and Information Administration, *An Assessment of the Near-Term Viability of Accommodating Wireless Broadband Systems in the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 MHz, and 4200-4220 MHz, 4380-4400 MHz Bands* (November 15, 2010), available at http://www.ntia.doc.gov/reports/2010/FastTrackEvaluation_11152010.pdf. NTIA selected the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 MHz, and 4200-4400 MHz bands for study in the Fast-Track Evaluation. There was insufficient time to complete the analysis of the 1755-1780 MHz band within the timeframe of the Fast Track Evaluation.

2. Activities

Since October 1, 2010, NTIA, the PPSG and the Federal agencies have endeavored to achieve the President’s goal of making 500 megahertz of spectrum available in ten years according to the Plan.

NTIA chaired nine meetings with PPSG and Spectrum Working Group (SWG) members through March 31, 2011.⁷ These meetings culminated in the NTIA identifying 1500 megahertz of Federal exclusive and shared spectrum bands to study for repurposing to exclusive or predominately non-Federal use. These spectrum bands are shown in Table 2-1.

Table 2-1 Federal and shared Spectrum Bands Under Investigation		
Frequency Band (MHz)	Amount (Megahertz)	Current Allocation/Usage (Federal, non-Federal, Shared)
406.1-420**	13.9	Federal
1300-1390**	90	Federal
1675-1710*	35	Federal/non-Federal Shared
1755-1780*	25	Federal
1780-1850	70	Federal
2200-2290	90	Federal
2700-2900**	200	Federal
2900-3100	200	Federal/non-Federal Shared
3100-3500	400	Federal/non-Federal Shared
3500-3650*	150	Federal
4200-4400**	200	Federal/non-Federal Shared
[4200-4220 & 4380-4400]*		Federal/non-Federal Shared
Total	1473.9	

* Bands selected for Fast Track Evaluation. For purposes of future analysis, 1755-1850 MHz – consisting of 1755-1780 and 1780-1850 MHz - will be assessed as a single block.

** Band obligated by U.S.-Canada or U.S.-Mexico bilateral agreement(s)

NTIA, in coordination with the PPSG-SWG, developed the methodology for prioritizing the bands for repurposing, the band selection factors and their associated descriptors. NTIA, with assistance from the Federal agencies and the PPSG-SWG, conducted an evaluation of the bands identified in Table 2-1, to develop an overall ranking based on the band selection factors enumerated in Table 2-2.

⁷ Spectrum Working Group is a working group of the PPSG

Table 2-2 Band selection factors
<ul style="list-style-type: none"> • Available bandwidth • Estimated revenue potential • Technology • Comparable spectrum • Relocation costs • Relocation achievable within ten years • Level of difficulty of required international agreements

From among the bands listed in Table 2-1, NTIA selected and ranked six blocks of spectrum for priority consideration for repurposing to non-Federal use for FCC-licensed wireless broadband systems:

1. 1755 – 1850 MHz
2. 1695 – 1710 MHz
3. 406.1 – 420 MHz
4. 1370 – 1390 MHz
5. 4200 – 4400 MHz
6. 3500 – 3650 MHz

On January 28, 2011, NTIA selected 1755-1850 MHz as the first block for detailed evaluation of the possibility of repurposing for wireless broadband. NTIA chose this spectrum for several reasons, including the nature of current Federal agency use of the spectrum, the likelihood of successfully repurposing within ten years, the international harmonization with mobile operations, the existence of mature wireless equipment, and the spectrum’s advantageous propagation characteristics for mobile operations. To assist the Federal agencies in conducting their evaluation, NTIA developed a set of spectrum for potential comparable spectrum for relocation from 1755-1850 MHz, and provided the set to the Federal agencies for review and analysis. NTIA continues to conduct technical analyses on 1755-1850 MHz and comparable spectrum bands and plans to complete the detailed evaluation of this band by September 30, 2011.

On January 19, 2011, in furtherance of the Fast Track recommendations, NTIA formally recommended to the FCC that it take regulatory action to repurpose the 1695-1710 MHz and 3550-3650 MHz bands for wireless broadband use on a shared basis.⁸ On March 8, 2011, the FCC released a Public Notice seeking comment on the steps the Commission could best promote wireless broadband deployment for these bands. NTIA is also pursuing repurposing the 4200-4400 MHz band and 1695-1710 MHz band as part of a proposal for a broad agenda item on broadband wireless access for the WRC-2016. In conjunction, the

⁸ See Letter from Karl B. Nebbia, Associate Administrator Office of Spectrum Management, National Telecommunications and Information Administration, to Julius Knapp, Chief, Office of Engineering and Technology, Federal Communications Commission (January 19, 2011).

Federal Aviation Administration (FAA) is conducting a technical analysis of the 4200-4400 MHz band with assistance from the affected Federal agencies.

Of the planned actions described in the Ten Year Plan and Timetable, Table 2-3 shows the completed actions.⁹

Table 2-3 Completed Actions to date	
• Developed and completed Ten Year Plan	Oct 1, 2010
• Identified initial candidate bands for repurposing	Oct 1, 2010
• Identified band evaluation factors for relocation	Oct 1, 2010
• Developed and completed Fast Track technical analysis and provided study recommendations	Oct 1, 2010
• FCC released an NPRM on Innovation in the Broadcast Television Bands : Allocation, Channel Sharing and Improvements to VHF ¹⁰	Nov 30, 2010
• Evaluated and prioritized bands for relocation	Jan 14, 2011
• Developed and provided comparable spectrum bands for relocation to PPSG and PPSG-SWG	Jan 14, 2011
• Prepared initial draft for proposed agenda items for WRC-2016 to PPSG-SWG ¹¹	Jan 14, 2011
• Recommended to the FCC that it take regulatory action on 1695-1710 MHz and 3550-3650 MHz to make it available for wireless broadband use on a shared basis	Jan 19, 2011
• Made first selection for relocation analysis – 1755-1850 MHz band	Jan 28, 2011
• Identified band evaluation factors for sharing	Feb 18, 2011
• FCC released Spectrum Task Force Requests Information on Use of 1675-1710 MHz Band ¹²	Mar 8, 2011
• Chaired nine meetings with PPSG & SWG	Mar 31, 2011

NTIA, FCC, the PPSG and SWG, and the Federal agencies continue to work together to achieve the objectives and timetable set out by the President and to identify and analyze the bands for repurposing and specific exclusive use. Table 2-4 summarizes the status and plans of the remaining actions.¹³

⁹ Table 8-1, Ten Year Plan and Timetable.

¹⁰ See http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-196A1.doc

¹¹ NTIA consulted with the Federal agencies on draft proposed agenda items.

¹² See http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-10-1035A1.doc

¹³ Table 8-1, Ten Year Plan and Timetable.

Table 2-4 Planned and Ongoing Actions

Table 2-4 Planned and Ongoing Actions	
NTIA	Status
• Execution/Implementation of Ten Year Plan and Timetable	Ongoing
• Assessed and identified international implications	Ongoing
• Selection(s) – additional band(s) for analysis as needed	Ongoing
• Conduct technical analysis of bands	Ongoing
• Evaluated and prioritized bands for sharing	Ongoing
• Publish First Interim Progress Report on the Ten Year Plan and Timetable	Scheduled for Apr 2011
• Decision #1 - High Priority Band(s) to be Repurposed	Scheduled for Oct 1, 2011
• Publish Second Interim Progress Report on the Ten Year Plan and Timetable	Scheduled for Oct 1, 2011
• Publish consolidated report	Scheduled for Nov 2011
• Decision #2 - Next Priority Band(s) to be Repurposed	Scheduled for Sep 2012
• Develop transition plan (regulatory)	Ongoing
• Publish First Annual Progress Report on the Ten Year Plan and Timetable	Scheduled for Oct 1, 2012
• Publish Second Annual Progress Report on the Ten Year Plan and Timetable	Scheduled for Oct 1, 2013
• Decision Point(s)- additional bands to be repurposed (as needed)	Scheduled for Jan 2014
FCC Actions	Status
• Identify candidate bands and seek input from public (technical and operational) Information	Ongoing
• Provide data on non-Federal Systems	Ongoing
• Initiate allocation rule-making in order of priority	
• Initiate service rule-making in order of priority	
• Issue authorizations for wireless broadband (via auction as appropriate)	
• Transition to non-Federal entities	
PPSG/SWG Actions	Status
• Planned meetings for remaining FY2011	PPSG: Jun 17, Aug 5, Sep 23 PPSG-SWG: Apr 8, May 6, Jun 10, Jul 15, Aug 12 and Sep 9
Federal Agencies	Status
• Provide data on Federal systems	Ongoing
• Conduct detailed analysis (Exit Evaluation)	Scheduled for Sep 2011
• Provide preliminary estimates of costs	Scheduled for Sep 2011
• FAA conducts technical analyses on the 4200-4400 MHz band with assistance from the affected Federal agencies.	Ongoing
• Provide feedback on comparable band(s)	Scheduled for Apr 1, 2011
• Provide interim report on priority band	Scheduled for Jun 1, 2011
• Complete detailed analysis report for 1755-1850 MHz band	Sept 30 2011
• Develop transition plans	Scheduled to start Oct 1, 2011 (as needed)
• Submit detailed cost estimates; based upon decision for repurposing	Scheduled for Aug 2012

3. Conclusion

NTIA, together with the Federal agencies and the PPSG, is working to implement the Plan in accordance with the Plan timelines. Pursuant to the Fast Track Evaluation, NTIA has recommended to the FCC that it act to make 1695-1710 MHz and 3550-3650 MHz bands available for wireless broadband use on a shared basis. In addition, the FAA has begun technical analyses of the entire 4200-4400 MHz band with technical assistance and input from other the affected Federal agencies and NTIA will continue to pursue a proposal for a broad agenda item at WRC-2016 on broadband wireless access to include the 4200-4400 MHz band and the 1695-1710 MHz band. For the overall Plan, FCC is working closely with and updating PPSG members on regulatory actions and the FCC may seek public input as appropriate on non-Federal system requirements/characteristics and public comment on those candidate bands sufficiently early in the process to allow time to complete allocation and service rulemaking proceedings. Follow-on necessary FCC actions may include modifying the Allocation Table, service rulemakings, promulgating incumbent relocation policy and requirements and auction rules where appropriate. The Office of Management and Budget has inserted proposals in the FY 2012 Budget to provide more flexibility to the Spectrum Relocation Fund to create a more efficient relocation process. NTIA has developed a work plan and guidelines for the Federal agencies via the PPSG and PPSG-SWG for the 1755-1850 MHz band study to aid completion of the detailed evaluation for the 1755-1850 MHz by September 30, 2011. Each of the above actions will contribute to making 500 MHz of spectrum available for mobile and fixed wireless broadband in ten years.