

On the U.S. National Broadband Plan of 2010--- Spectrum Policy (Comment)

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I. Main Objectives of the Spectrum Policy

Greater transparency

Incentive mechanism

Allocate more spectrum for broadband

+500MHz by 2020, of which +300MHz by 2015

growing spectrum needs

Others

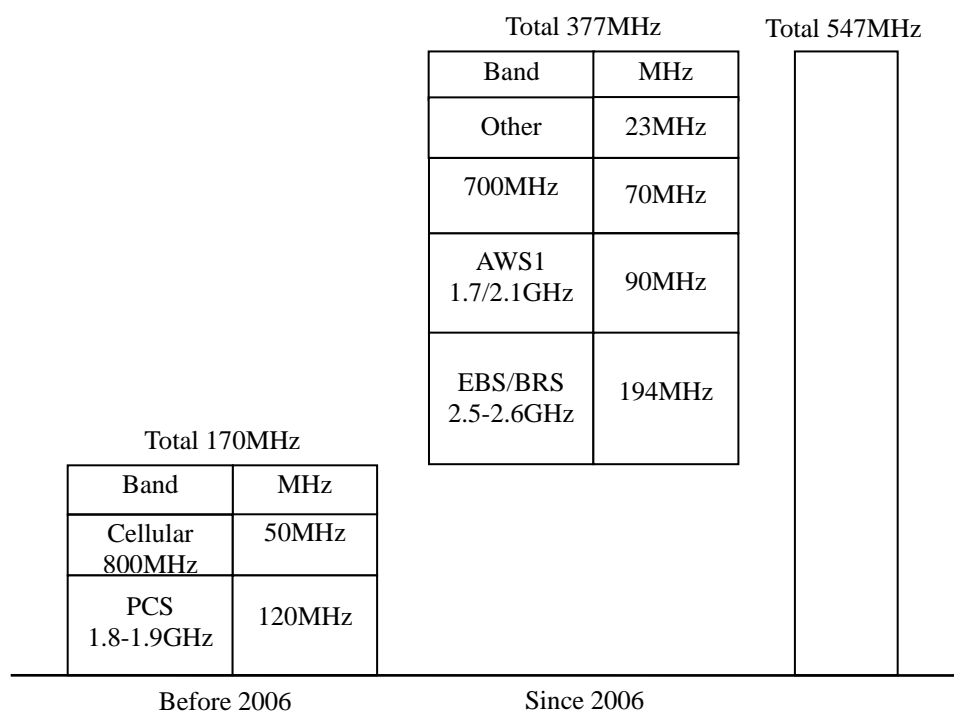


Fig.1: Spectrum Baseline, 2010¹

Band	Megahertz	Action Planned (CY)
WCS (2.3GHz)	20	
AWS 2/3 (1.8-2.1GHz)	60	Analysis Q3/2010
D Block (700MHz)	10	Order/NPRM Q2/2010
Mobile Satellite Services (MSS) (1.5-2.5GHz)	90	NPRM Q3/2010
Broadcast TV (DTV, UHF)	120	NPRM Q3/2010
Total	300	

Fig.2: 300 Megahertz Goal by 2015²

II. Proposed Strategies for Reallocation/Repurposing

A. In general

Planning/Proposal by FCC (NBP, Spectrum Task Force (?))

Legislation by Congress

Rulemaking/Order by FCC

Auction/Assignment

Clearing/Deployment

B. Incentive mechanism proposed for the broadcast TV band

Introduce a scheme for sharing auction revenues between FCC (U.S. Treasury) and incumbents

Invite broadcasters to return spectrum

Points: how, and at what level, to determine an appropriate % for “revenue sharing”?
no rule or a formula proposed yet

Opinions:

Broadcasters: No

Congress: Yes/No

General: Yes/No

C. Congress actions, etc.

1. “Radio Spectrum Inventory Act (HR3125),” introduced 7/8/2009, passed by the House 4/14/2010, received in the Senate 4/15/2000.
2. Spectrum Dashboard offered by FCC (β version 3/17/2010)
may reflect the intention of HR3125.
3. “Spectrum Relocation Improvement Act of 2009 (HR3019),” introduced 6/24/2009, referred to the House Committee on Energy and Commerce 6/24/2009, to the Subcommittee on Communications, Technology, and the Internet 6/25/2009.
4. FCC, Spectrum Task Force, created 4/26/2010.

D. Overlay auction (Hazlett [2009])

TV band of 294MHz: valued \$1 trillion (in present value)

Abolish the current white-space scheme (underlay use)

Create 7 national 42MHz-slots from the TV band

Auction an overlay license on each of the 7 slots (actual proposal)
Overlay licensees may bargain with TV stations for vacating spectrum
TV stations may stay but must broadcast OTA free to viewers
This means to conduct reverse auction to connect OTA TV viewers (10% of all viewers) to cable, DBS, broadband, or others (theoretical consideration).

III. A Scheme with Compulsory Revelation of Spectrum Supply Prices (Oniki [2010])

Basic principles:

1. Spectrum is a property owned and controlled by the society collectively.
2. Spectrum may be used exclusively or non-exclusively by a user for an indefinite period; the right to use spectrum, however, is by no means permanent.
3. The spectrum user shall declare an amount representing the value of the spectrum block to the user.
4. The spectrum user shall yield the spectrum block when requested with a compensation equal to or exceeding the amount declared.
5. The spectrum user shall pay a usage fee to the government; the fee shall be equal to the multiplication product of the amount of compensation declared by the user and the fee-rate to be determined by the government.

References

- FCC [2010a], "Connecting America: The National Broadband Plan," March 16, 2010.
<<http://www.broadband.gov/download-plan/>>
- [2010b], "FCC Announces Broadband Action Agenda," FCC News, April 8, 2010.
<http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-297402A1.pdf>
- Hazlett, T.W. [2009], "Unleashing the DTV Band: A Proposal for an Overlay Auction," Comment submitted to FCC on NBP Public Notice #26, December 18, 2009.
<http://mason.gmu.edu/~thazlett/pubs/NBP_PublicNotice26_DTVBand.pdf>
- Oniki, H. [2010], "Toward Designing Economic Mechanism for Spectrum Reallocation --- A System with Compulsory Revelation of Supply Prices" (Outline), to be presented at the 18th Biennial Conference of the International Telecommunications Society (ITS), Tokyo, June 27-30, 2010. <<http://www.ab.auone-net.jp/~ieir/eng/publication/201006a.html>>

¹ Exhibit 5F in FCC [2010a], p.85; altered by the author.

² Exhibit 5E in FCC [2010a], p.84 and FCC [2010b] with the table attached; altered by the author.