

Playing Both Sides of the Street

or, A Review of BAS Issues
Affecting Both Radio & TV

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FCC Crackdown on BAS?

- October 20, 2004, \$8,000 FCC NAL for unauthorized frequency change of an Aural STL (951.0 MHz authorized, 948.873 MHz actual) plus unauthorized relocation of the STL transmitter. That's probably four times what it would have cost for a PCN and a Form 601 filing, to have done it right in the first place.

ET Docket 01-75

- Updating and harmonizing of the BAS Rules.
- Allowed (gasp!) digital modulation for all TV and Aural BAS microwave bands (no more STAs!).



- An outgrowth of RM-9418, a 1999 petition for rulemaking by EIA/TIA. Only took SBE letters to Media Bureau, then to Chairman Powell, and then to the House Telecommunications Subcommittee, to get FCC action.



- Adopted a PCN requirement for all TV BAS bands except 2 GHz, and for the 950 MHz Aural BAS band.
- Effective October 16, 2003, when the FCC declined the SBE request for a second and final six-month stay of the PCN requirement.
- Still problems with missing or erroneous data in the ULS.



used facilities can be installed without causing harmful interference to other users. Finally, we find it necessary to require the submission of detailed engineering calculations, as suggested.¹¹⁶ The accomplishment of such calculations is inherent to the frequency coordination process. In regard, we rely on coordinators to use good engineering judgment when coordinating systems in accordance with the interference criteria. Requiring a detailed engineering submission such as that described is therefore unnecessary.

BAS/CARS Frequency Band	Frequency Coordination Procedures		
	Existing Requirements	New Requirements	
	Fixed and Mobile	Fixed	Mobile
2 GHz	Local	Local (no change)	Local (no change)
2.5 GHz	Local	Prior	Local or Prior
6.5 GHz	Prior	Prior (no change)	Prior (no change)
7 GHz	Local	Prior	Local or Prior
13 GHz	Interference Criteria	Prior	Local or Prior
18 GHz	Prior	Prior (no change)	Prior (no change)

64. An additional issue related to frequency coordination involves protection standards. MRC asks that we adopt interference criteria for BAS coordination that is similar to the procedures in Sections 101.105(c) and 101.103(d). These criteria incorporate TIA TSB 101.105(c) and 101.103(d) alternatively, the exercise of good engineering practices or conservative default criteria. SBE, commenting directly on Section 101.105, recommends that coordinators be given flexibility regarding frequency coordination.¹¹⁷ We note that the *Notice* discussed the importance of uniform frequency coordination procedures and standards to simplify coordination in shared bands and minimize

- So now a commercial microwave frequency coordinator (CMFC), perhaps using only ULS records, and perhaps with no familiarity with local frequency coordination conditions or “understandings,” will be doing the PCN.
- All the more important to ensure that your BAS records in the ULS are **ACCURATE.**

Minimum Antenna Standards for 950 MHz Aural BAS?

- FCC staff has been applying a $\leq 20^\circ$ HPBW criteria to 950 MHz Aural BAS TX antennas, but there is no such requirement!
- All §74.536(a) requires is use of a directional antenna; there are no minimum antenna standards (i.e., Cat A, Cat B) for 950 MHz Aural BAS.

- §101.115 of the POFS Rules does NOT apply to Part 74, Subpart E, Aural BAS stations. Also, §101.115 does not include the 944–952 MHz band; just 931.5–935 MHz, 941.5–944 MHz, and 952–960 MHz, none of which are 950 MHz Aural BAS frequencies.

HISTORY

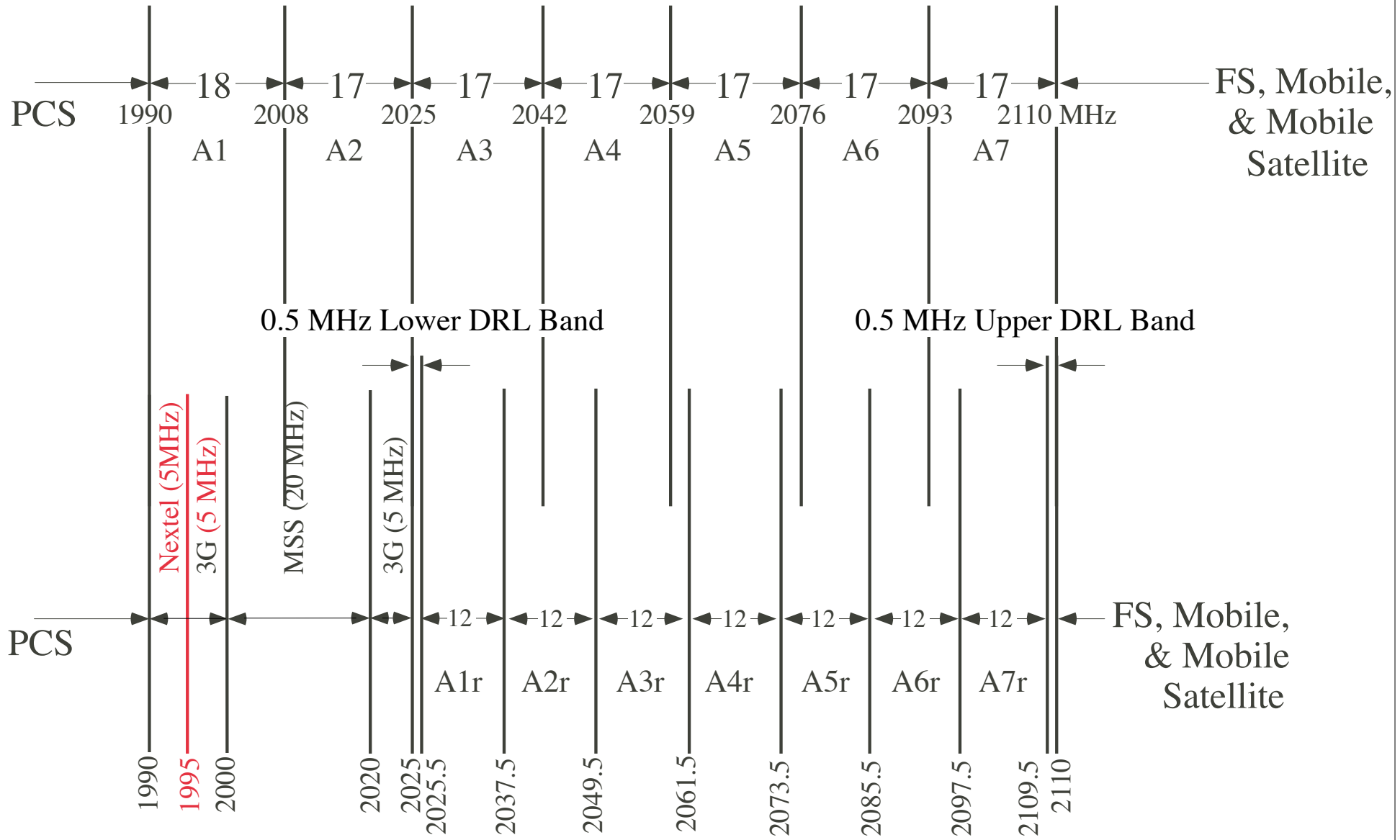
- 1989 request by FCC that SBE submit a petition for rulemaking for minimum antenna standards for 950 MHz Aural BAS stations. SBE did so, on 1-23-1990.

- FCC then sat on that petition for almost two years, without ever assigning it an "RM" number. Then, on 11-14-1991, the FCC dismissed the petition without action, saying that there was no need for minimum antenna standards for 950 MHz Aural BAS.

• So it is inappropriate for FCC staff to now be arbitrarily and capriciously applying a 20° HPBW standard. The FCC should instead dust off the 1990 SBE petition, issue an NPRM, obtain input, and issue a R&O. If that R&O adopts minimum antenna standards for 950 MHz Aural BAS, then, and only then, can FCC start enforcing such a requirement.

2 & 2.5 GHz TV BAS

- Alphabet Soup: ET 92-9 (Emerging Technologies); ET 95-18 (MSS); ET 00-258 (3G); ET 00-258, Fourth NPRM (DoD uplinks); WT 02-55 (800 MHz SMR IX and 2 GHz Spectrum for Nextel); IB 02-364 (MSS ATC); WT 03-66 (BRS1).

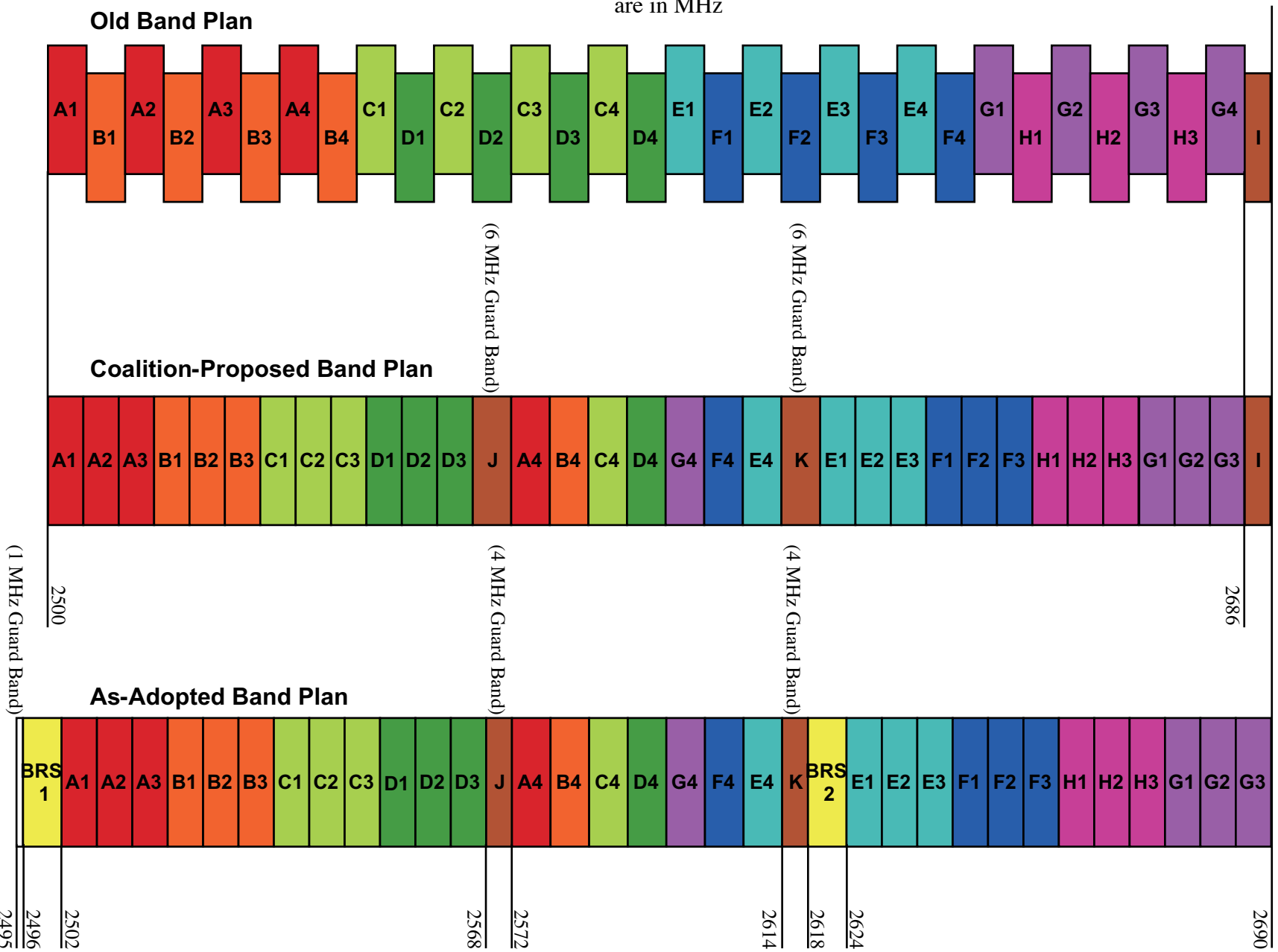


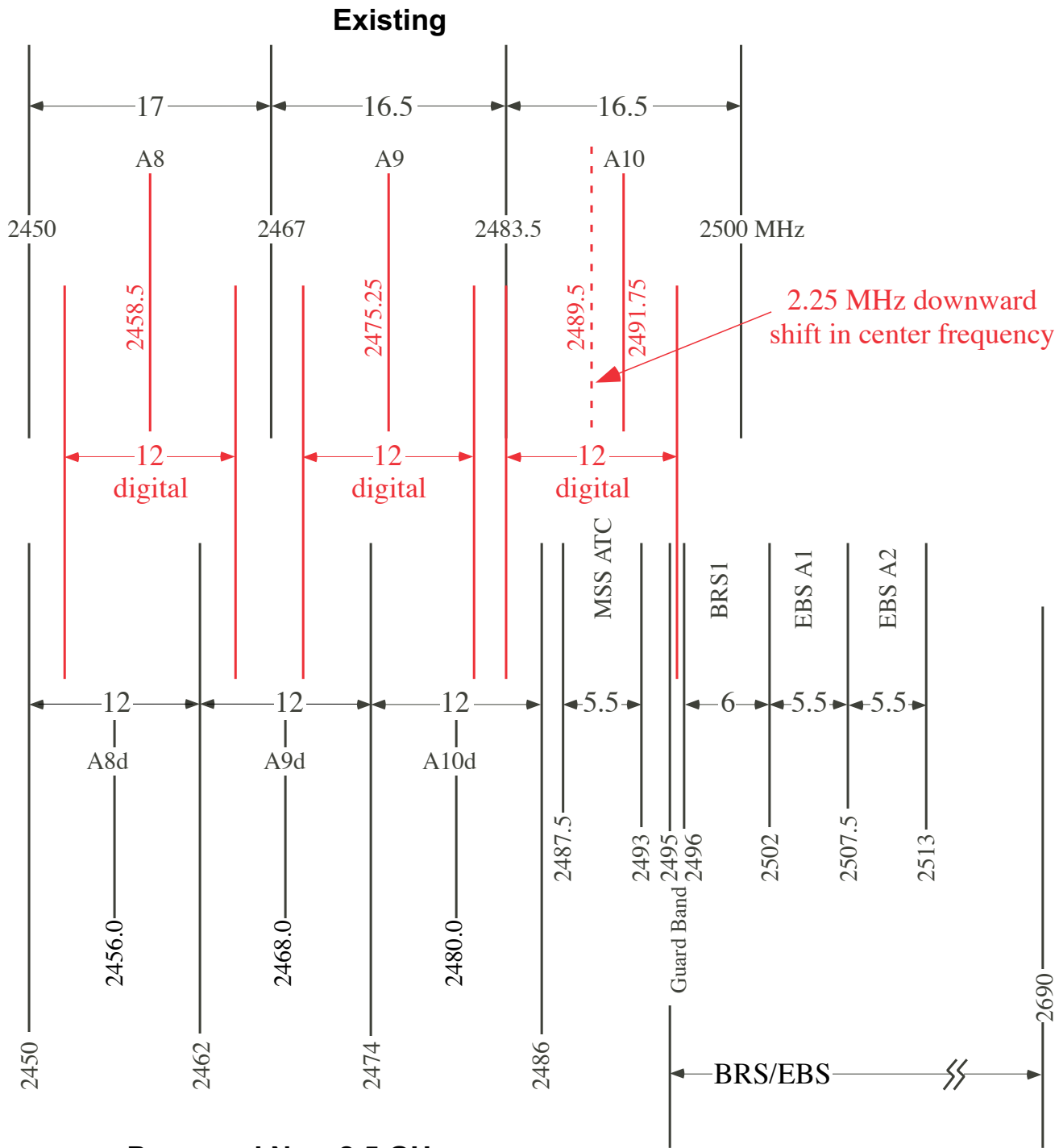
Final New Band Plan

Summary of the July 29, 2004, WT 03-66 R&O

Old, Coalition-Proposed, and As-Adopted Band Plans

All Frequencies are in MHz





Proposed New 2.5 GHz TV Band Plan

- Does modifying a grandfathered Channel A10 station to digital terminate the “grandfather” rights?



- I submit that it does not: NG147 says nothing about any major change modifications terminating "grandfather" rights:
- NG147--Stations in the broadcast auxiliary service and private radio services licensed as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, may continue to operate on a primary basis with the mobile-satellite service and the radio-determination satellite service.

- Further, the May 8, 1986, R&O to General Docket 84-869, which established the grandfather rights, also did not mention any policy about a major modification voiding those rights.
- By comparison, some FCC rule sections that confer grandfather rights have a provision that a major modification voids the grandfather rights; e.g., Section 74.655(a) regarding “grandfathered” TV BAS transmitters.



- Therefore, absent an explicit clause stating that a major change modification voids a particular “grandfather” right, it would appear that there is no basis for doing so.
- Finally, NG147 was re-affirmed by the July 16, 2004, ET Docket Fourth R&O.



- Bottom line: Converting a “grandfathered” Channel A10 station from analog to digital (a major change modification) should NOT terminate the “grandfather” right to continue to operate at 2,483.5–2,500 MHz, on a co-equal, protected, basis.



- ET Docket 03-254: Frequency coordination rules for the sharing of the 7 and 13 GHz TV BAS bands with MSS uplinks and downlinks.

- An outgrowth of ET Docket 98-142 (7 GHz MSS feeder downlinks) and ET Docket 98-206 (13 GHz MSS Gateway uplinks). FCC said it would get around to developing coordination rules in a future rulemaking; ET 03-254 is that "future rulemaking."

- SBE comments to ET 03-254 filed on March 3, 2004. SBE reply comments filed on March 18, 2004.
- Biggest issue is the licensing of MSS uplinks and downlinks on a “full spectrum, full arc” basis, an extremely preclusive practice.



- SBE comments took the position that this constitutes “spectrum warehousing,” which is specifically prohibited in Section 309(j)(4)(B) of the Communications Act.
- Awaiting a R&O.



- CS Docket 99-250: Allows private cable operators (PCOs) access to the 13 GHz CARS band, which is shared with the 13 GHz TV BAS band.
- WT Docket 00-32: Opened up 50 MHz of spectrum, at 4,940-4,990 MHz, to public safety users for tactical video downlinks (TVDLs). Should allow, and may require, public safety POFS licensees to migrate off of 2.5 and 6.5 GHz.



- ET Docket 03-237: Noise temperature criteria for Part 15 devices. Proposes a 77 dB increase in the allowable EIRP for Part 15 devices operating in the 13 GHz TV BAS band! SBE comments opposing proposal filed on April 5, 2004. SBE reply comments filed on June 1, 2004.



- ET Docket 03-108: "Cognitive radios," aka "software defined radios." Proposes a six-fold (8 dB) increase in the allowable TPO and ERP for 2.4 GHz Part 15 Wireless LANs. Will cause more severe interference to TV BAS operations on Channel A8 (2,450-2,467 MHz) and Channel A9 (2,467-2,483.5 MHz).

- ET 03-108 also proposes to allow the importation of Part 15 devices capable of operating over 2,400–2,500 MHz rather than just 2,400–2,483.5 MHz. These wider frequency Part 15 devices would be required to use a GPS receiver to detect what country they are in; if it's the U.S., the device would supposedly not allow use of 2,483.5–2,500 MHz.

More Trouble

- ET 04-37 BPL
- ET 04-186 Part 15 devices on "unused" (hah!) TV channels (comments due November 30, 2004).

A "Target Rich" Environment

- TV BAS spectrum is under attack in virtually all bands.
- Little or no Media Bureau involvement. All the rulemakings are OET, WT, or IB. Sad.



- No lack of BAS-related rulemakings for the SBE FCC Liaison Committee to comment on; sometimes it seems like trying to “bail out the ocean.”



- For a complete list of all SBE filings since 1988, visit the SBE web site at www.sbe.org, and download the pdf.
- Recent SBE filings can also be downloaded from the SBE web site, or, of course, from the FCC's electronic comment filing system (ECFS).



Questions?