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December 19, 1996

Mr. William F. Caton
Secretary
Federal Communications Commission
1919 M Street, N. W., Room 222
Washington, D. C. 20554

In re: WT Docket 96-86

Dear Mr. Caton:

On behalf of the Society of Broadcast Engineers, Inc., please find an original and nine copies of the Reply Comments in Docket WT 96-86, Public Safety Spectrum Requirements Through the Year 2010.

Should any question arise concerning this document, please contact the undersigned counsel.

Yours very truly,

Christopher D. Imlay

CDI:mf

CC:Jim Hollansworth, NASA

Attachments

Reply Comments of the Society of Broadcast Engineers, Inc.

WT Docket 96-86

Public Safety Spectrum Requirements Through the Year 2010

December 19, 1996

SOCIETY OF BROADCAST ENGINEERS, INC.
Indianapolis, Indiana

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
The Development of Operational,	)	WT Docket No. 96-86
Technical, and Spectrum Requirements	)	
for Meeting Federal, State and Local	)	
Public Safety Agency Communication	)	
Requirements Through the Year 2010	)	

To: The Commission

Reply Comments of the Society of Broadcast Engineers, Inc.

The Society of Broadcast Engineers, Incorporated (SBE), the national association of broadcast engineers and technical communications professionals, with more than 5,000 members in the United States, hereby respectfully submits its reply comments in the above-captioned rulemaking relating to Public Safety spectrum needs through the Year 2010.

I. PSWAC Report Has Several Fundamental Errors

1. SBE does not normally comment in Public Safety matters as it does not consider itself to be expert in public safety communications. However, in identifying spectrum requirements to be met by a taking of broadcast spectrum allocations, the writers of the Public Safety Wireless Advisory Committee ("PSWAC") Final Report ("Report"), filed as comments to this proceeding on September 11, 1996, have made several serious errors and misstatements. It is the purpose of these SBE reply comments to point out those errors and misstatements.

II. 174-216 MHz TV High-Band Spectrum is NOT Available for Reallocation

2. At Page 10 of Appendix D ("Spectrum Requirements Subcommittee Final Report"), and at Paragraph 75 of the Notice of Proposed Rulemaking ("NPRM"), the recommendation that portions of the 174–216 MHz VHF television band be either shared by, or reallocated to, public safety land mobile uses. SBE strongly disagrees with the logic of that recommendation. In the Sixth Further Notice of Proposed Rulemaking to MM Docket 87-268, concerning the Digital Television ("DTV") Table of Allotments, TV Channels 7 through 59 were proposed for DTV stations, meaning that the Commission would attempt to squeeze all DTV stations into those "core channels." Therefore, the spectrum from 174 to 216 MHz is

most definitely not a good candidate for land mobile sharing or re-allocation, and, during the transition period, when both NTSC and DTV stations will be operating, these core spectrum channels will be even more heavily loaded with television broadcast transmissions.

III. 1,990–2,110 MHz Band

3. At Pages 59, 61, and 641 of the Report, the PSWAC and its Spectrum Requirements Subcommittee identified the spectrum between 1,990 and 2,110 MHz as "reallocated for emerging technologies" and "not yet designated for specific use." FALSE! This spectrum is the primary band used by television broadcasters for Electronic News Gathering ("ENG") and for coverage of sporting and other entertainment events, and there is currently no other spectrum capable of replacing it for these uses. During a disaster, this is the band which is used to relay broadcast pictures of the hard hit areas, which Public Safety personnel use to help allocate their resources. Gathering this sort of information is something broadcasters do very well and so save many emergency service resources from having to do it.

4. Although broadcasters may lose the bottom 35 MHz of the 2 GHz TV Broadcast Auxiliary band (ENG Channels A1 and A2) by January 1, 2000, due to reallocation to MSS, the remaining portion of the band, 2,025–2,110 MHz (ENG Channels A3 through A7), and 2,450–2,483.5 MHz (ENG Channels A8 and A9) remain available to TV broadcasters on either a primary (A3–A7) or shared (A8 & A9) basis. Further, ENG Channels A1 and A2 are not awaiting a "designated use," but rather may be re-allocated to the Mobile Satellite Services ("MSS").

5. So if the still remaining 2 GHz TV Broadcast Auxiliary frequencies were to be reallocated to Public Safety use, the Public Safety community would be poking itself in the eye. Broadcasters play a significant public safety role during times of emergency.

IV. UHF Television Spectrum

6. At Page 636, the Report cites the spectrum-saving benefits of conversion to DTV. These include the wasteful UHF "taboo" channels necessary to protect UHF television receivers. SBE concurs with these benefits, but points out that broadcasters are in no way responsible for the spectrum-wasteful design of TV receivers. The member companies of the Electronic Industries Association Consumer Electronics Group ("EIA-CEG") have made profits for decades by selling these receivers. Broadcasters have not received one cent of benefit from failure to implement spectrum-efficient receivers. PSWAC seeks television

channels to be made available by the better receivers that will be necessary to implement DTV.

7. However, PSWAC also seeks to acquire many of the UHF channels immediately, despite the fact that they will be needed in order for the conversion to DTV to occur. For example, the Report seeks part of TV Channels 60–69 immediately (within 5 years), and all of this spectrum eventually (Pages 3, 21, 59, 61, and 640). The Report especially seeks the use of unallocated "adjacent" channels immediately, despite the fact that use of these channels would disrupt television viewing for existing NTSC analog receivers. The Report seeks specific "unused" Channels 14–20 immediately and eventually the whole of those channels (Pages 21–22, 59, 61, and 640). To attempt to re-use UHF TV frequencies anywhere that the population is dense enough to support DTV will prevent conversion from NTSC to DTV from happening at all and would thus prevent any of the benefits desired from DTV conversion.

8. The problem is really very simple. The DTV signal is a new signal that is totally different from the present NTSC analog television signal. It cannot be received on present TV sets. It also cannot be simulcast within TV channels that are currently in use. A new channel must be established for transmitting the DTV signal of each television station, and both signals must be transmitted together for long enough to permit every television set currently in the hands of the public to either be replaced or to be equipped with a new tuner which is capable of receiving the new DTV signal. This means that:

8A. Currently unused TV channels are needed to transit the new DTV signal during the conversion period. Any station that does not have both channels will be effectively off the air for either the "old" NTSC analog or for "new" DTV receivers.

8B. The new channels must be established early for broadcasters to convince the public to buy the receivers needed to receive the new signals. Since broadcasters do not own and did not sell the current sets, and do not in any way control the receiver marketplace, they cannot control the process of converting the public to the new system. All broadcasters can do is make enhancements available on the new DTV signal to encourage people to convert.

8C. During the conversion process, the old sets, with all their failings, will remain in use. The conversion is difficult because it is necessary to design the new transmission systems in congruence with the old, to minimize disruption to present TV sets throughout the transition period. Without new spectrum, and with all of the defects inherent in existing sets, and as

magnified by anomalies of propagation, it will be difficult to keep both the new and old systems on the air without compromising reception of one or both.

V. EAS

9. An issue not even mentioned in the PSWAC Report is the new Emergency Alert System ("EAS"), which, for broadcasters, will go into effect on January 1, 1997. With EAS, broadcasters are embarking on a new partnership not only with the FCC, but also with the Federal Emergency Management Agency (FEMA), the National Weather Service (NWS), and local governments. A broadcaster chairs each local EAS committee. A key part of each EAS committee's task is to work with local governments to come up with both alerting and long-term information delivery protocols during emergencies.

10. Two issues the Commission therefore needs to consider in reaching a decision in this rule making are: 1) How will the broadcast industry react to the Commission's desire for the enhanced voluntary cooperation needed to make EAS work in light of the proposed reallocation of spectrum for Public Safety uses? and 2) What kind of support will the Chairs of local EAS Committees receive from station owners if Broadcast or Broadcast Auxiliary spectrum is reallocated to Public Safety uses and thereby causes major negative impacts to both on-air and ENG channels?

VI. SBE Opposes Proposed "Post-License-Grant" Frequency Coordination for Shared Bands

11. At Paragraph 94, the NPRM proposed to allow frequency coordination post-license grant for public safety licensees, rather than pre-license grant. SBE has no objection to such an approach (which it considers unwise) for those bands that are uniquely allocated to Public Safety users, but strongly opposes such a policy for bands that are shared by broadcasters (for example, ENG Channels A8 and A9). It is one thing if public safety users end up creating more interference amongst themselves as a result of misguided post-license frequency coordination; it is another matter entirely if such spectrum policy leads to increased interference to other users in such shared bands. Frequency coordination prior to license grant remains a fundamental principle of good spectrum management, and SBE wants to see it continue for bands in which broadcasters operate.

VII. Summary

12. SBE is very sympathetic to Public Safety spectrum needs. SBE respectfully reminds the Commission that both Government and broadcasters share in a critical mission that is the embodiment of the Communications Act of 1934 phrase "...in the public interest and convenience." When civil and weather emergencies threaten the safety of life, limb, and property, both must have their own spectrum resources.

Society of Broadcast Engineers, Inc.

By _____
Terrence M. Baun, CBRE
President

By _____
Dane E. Ericksen, P.E., CSRE, CSTE
Chairman, SBE FCC Liaison Committee

By _____
Christopher D. Imlay, Its Counsel

December 19, 1996

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