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Ex parte comments to ET Docket 00-258

May 6, 2002

These SBE comments to WT Docket 02-55 (Improving Public Safety Communications in the 800 MHz Band [and possible 2 GHz SMR stations]) are being simultaneously filed as *ex parte* comments to ET Docket 95-18 (MSS), to ET Docket 00-258 (3G), to IB Docket 01-185 (Terrestrial MSS) and to ET Docket 01-75 (Updating of the Part 74 BAS Rules) since these SBE comments are also pertinent to those related and contemporaneous rulemakings.

Respectfully submitted,

Society of Broadcast Engineers, Inc.

/s/ Troy Pennington, CSRE
SBE President

/s/ Dane E. Ericksen, P.E., CSRTE
Chairman, SBE FCC Liaison Committee

/s/ Christopher D. Imlay, Esq.
Its Counsel

Comments of the Society of Broadcast Engineers, Inc.

WT Docket 02-55 Improving Public Safety Communicaitons in the 800 MHz Band (and Possible 2 GHz SMR Stations)

May 6, 2002

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SOCIETY OF BROADCAST ENGINEERS, INC.
Indianapolis, Indiana

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

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	WT Docket No. 02-55
	)	
Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels	)	
	)	

To: The Commission

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 world wide, hereby respectfully submits its comments in the above-captioned notice of proposed rulemaking relating to improving public safety communications in the 800 MHz band and consolidating the 900 MHz Industrial/Land Transportation and Business Pool channels, and the possible creation of a Specialized Mobile Radio ("SMR") allotment at 2 GHz.

I. Replacement Cellular-Type Digital SMR Spectrum

1. At Paragraph 52 of this notice of proposed rulemaking ("NPRM"), the Commission raises the possibility of using the 1,990–2,025 MHz for replacement spectrum for digital cellular type, specialized mobile radio ("SMR") formerly in the 800 MHz. According to the NPRM, alternative spectrum is needed to allow "de interleaving" 800 MHz commercial mobile radio service ("CMRS") operations from 800 MHz public safety operations, because of reported interference from commercial high power, low-elevation, large beam tilt CMRS base stations to closely located portable public safety radios experience brute force overload ("BFO") from the interleaved (*i.e.*, adjacent-channel) CMRS signals, which can be many orders of magnitude stronger than a relatively weak signal form a more distant "big-stick" public safety base station or repeater, which typically covers a much wider geographic area. This "interference" occurs even though the CMRS base station is operating in accordance with all FCC rules. Nevertheless, this impedes the functioning of public safety radio communications.

2. Use of 1,990-2,025 MHz by terrestrial SMR stations raises the same interference concerns that SBE pointed out in the IB Docket 99-81 rulemaking, which proposes to allow Mobile Satellite Service ("MSS") stations to build a supposedly "ancillary terrestrial component" to its low earth orbit satellite transmissions. These concerns include adjacent-channel interference both to and from SMR base stations if those stations should migrate to the 1,990–2,025 MHz band. Further, brute-force overload of the many remotely controlled, steerable, 2 GHz electronic news gathering ("ENG") receive sites that broadcasters in many markets employ to ensure that an ENG truck at a news event* will be able to "see" at least one such receive site, and relay its time-sensitive programming back to the TV station studio, is also a concern. Thus, if the Commission is to allocate terrestrial SMR base stations to the 1,990–2,025 MHz band, instead of "terrestrial" 2 GHz MSS base stations, or in lieu of International Mobile Telecommunications 2000 ("IMT-2000," aka third-generation wireless systems, or "3G") terrestrial base stations, as proposed in ET Docket 00-258, then out-of-band spurious signal limits sufficient to protect an adjacent-channel ENG receive only site must be adopted, and protocols must be enacted to ensure that a terrestrial SMR base station does not cause brute force overload to an ENG receive site. Brute force overload to ENG receive sites from Personal Communication Services (“PCS”) base stations has already proved to be a problem; the Commission can hardly justify solving a brute force overload problem in the 800 MHz band by creating that same problem to 2 GHz ENG receive sites.

3. There would also be a threat of “reverse interference” from 2 GHz ENG operations (by then refarmed to the new 2 GHz TV BAS band of 2,025–2,110 MHz) to SMR radios. This reverse interference would be likely where ENG operations occur near a 2 GHz SMR base station and the relatively high power ENG signals are transmitting close to and/or aimed at an SMR base station in order to see the companion ENG receive site some distance behind the 2 GHz SMR site. These multiple ENG transmissions could then overload the SMR sector receivers, rendering those sectors inoperative for the duration of the nearby ENG operations. Should the SMR site employ an omnidirectional receive antenna, as many do, the entire SMR site could then be rendered inoperative.

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* A “news event” can include anything from real-time coverage during periods of local, state, or national emergencies to coverage of sporting events, political conventions, and public service events such as fund-raising marathons. Thus, modern-day ENG operations have gone a long way towards allowing broadcasters to fulfill their Communications Act obligation to operate in the “public interest, convenience and necessity.”

4. As has been the case with other relocation plans, including the apparently failing succession of MSS projects, the Commission must continue to ensure that new SMR licensees reimburse broadcasters for all reasonable and prudent costs for relocating present Part 74 TV BAS operations out of 1,990–2,025 MHz, if it is to be SMR licensees who end up winning the present "musical chairs" rulemakings vying for 1,990–2,025 MHz: namely, this instant WT 02-55 rulemaking, the IB Docket 01-185 "terrestrial MSS" rulemaking, the ET Docket 00-258 "3G" rulemaking, and the ET Docket 95-18 "MSS" rulemaking. SBE notes that Nextel has not provisioned any funds to compensate displaced users, nor does Nextel claim or accept responsibility for displacement and relocation costs to incumbent licensees. Consistency and precedent compel such protection be afforded to incumbents being displaced by newcomers who have not participated in auctioning of that spectrum.

II. SBE (Again) Urges the Commission to Stay the Present Two-Year Mandatory Negotiation Period Between Broadcasters and MSS

5. As requested at Paragraph 60, SBE will not repeat its detailed comments already filed to these rulemakings. However, SBE finds that adding a FOURTH rulemaking to the "let's re-allocate ENG Channels A1 and A2" frenzy makes it even more unreasonable to expect broadcasters to be able to conduct any sort of meaningful negotiations with MSS, since it is now all the more questionable whether the Phase I/Phase II band plans adopted by the ET Docket 95-18 Second Report & Order will ever come to pass, or even who broadcasters should be talking with. This, in turn, makes the band plans for a refarmed 2 GHz TV broadcast auxiliary service ("BAS") frequencies a continuing moving target with no practical end in sight. The result is that any new 2 GHz hardware that broadcasters might be considering will need to be bandwidth-agile (*i.e.*, 17 MHz, 14.5 MHz, 12.1 MHz, plus all possible split-channel options) <u>as well as</u> frequency-agile. All of which adds significantly to the complexity, development time, and end-user cost of replacement 2 GHz ENG systems.

6. Finally, SBE is compelled to point out that, more than FOUR YEARS after the EIA/TIA filed its Petition for Rulemaking in March, 1998, to allow digital modulation in all of the TV BAS microwave bands, and not just the 6.5 and 18 GHz TV BAS bands, this issue is STILL PENDING, in the ET Docket 01-75 rulemaking. So broadcasters have a further wild card of not knowing when the advantages of digitally modulated 2 GHz ENG radios might be applied. Accordingly, the two-year mandatory negotiation period ("MNP") between broadcasters and MSS that commenced on September 6, 2000, must be stayed, as requested by the National

Association of Broadcasters ("NAB") and the Association for Maximum Service Television, Inc. ("MSTV") in their joint October 22, 2001, filing.

III. Summary

7. There are now a total of FIVE contemporaneous rulemakings affecting the 2 GHz TV BAS band: WT Docket 02-55; IB Docket 01-185; ET Docket 95-18; ET Docket 00-258; and ET Docket 01-75. A stay of the present mandatory negotiation period between broadcasters and MSS is therefore imperative, pending clarification of exactly who will be the newcomer users of 1,990–2,008 MHz and 2,008–2,025 MHz, what the band plan will be, and what modulation ENG will be allowed to employ. Any rulemaking that allows additional terrestrial base stations at 1,990–2,008 MHz or 2,008–2,025 MHz must ensure protection of adjacent-channel 2 GHz TV BAS operations, and must ensure that brute force overload to ENG receive sites is not caused.

Respectfully submitted,

Society of Broadcast Engineers, Inc.

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