

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

In the Matter of	)	
	)	
Amendment of Parts 1, 21, 73, 74 and 101	)	WT Docket 03-66
Commission's Rules to Facilitate the Provision of	)	RM No. 11614
Fixed and Mobile Broadband Access, Educational	)	
and Other Advance Services in the 2150–2162	)	(ET Docket 10-142)
and 2500–2690 MHz Bands	)	(ET Docket 02-364)
	)	

**Reply Comments of EIBASS**

Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (EIBASS) hereby respectfully submits its reply comments in the above-captioned WT Docket 03-66 Fourth Further Notice of Proposed Rulemaking (Fourth FNPRM) relating to relaxed out-of-band-emissions (OOBE) for Part 27 Broadband Radio Service (BRS) and Educational Broadband Service (EBS) stations. The reply comment deadline is July 22, so these comments are timely filed.

**I. WCAI and Other BRS Proponents Underestimate Interference Threat  
To Grandfathered TV BAS Channel A10**

1. As expected, the comments of the Wireless Cable Association International (WCAI) underestimate the interference threat to indefinitely grandfathered, co-primary, and earlier-in-time TV Broadcast Auxiliary Service (BAS) 2,483.5–2,500 MHz Channel A10 stations. What was not expected was that Alcatel-Lucent, Motorola and TIA would also file comments underestimating that interference; EIBASS is disappointed to see that happen. It is unfortunate that all four parties studiously avoid directly addressing the TV BAS Channel A10 issue, even though EIBASS filed comments to the predecessor RM-11614 about the TV BAS Channel A10 problem.

2. WCAI argues that the relaxed out-of-band emission (OOBE) limits, which it is now also calling a spectral emission mask (SEM), will in actuality be lower than the relaxed OOBE it has requested; but, if so, why does WCAI need relaxed OOBE for BRS stations? WCAI's claim is inconsistent on its face.

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3. WCAI continues to argue how unlikely interference would be, but carefully avoids addressing the TV industry's routine use of electronic news gathering receive-only (ENG-RO) sites at high-elevation locations, often employing sensitive preamplifiers directly in the receiving antenna's feed horn. WCAI repeats its RM-11614 arguments about how unlikely it would be that a hand-held or customer premises equipment (CPE) device would ever be close enough to any other service's receiving antenna to cause interference as a result of the proposed relaxed OOB, even though in the EIBASS comments to RM-11614 it was pointed out that ENG-RO sites are often located at the tops of high-rise buildings; as in high-rise buildings with condominiums with CPE devices, and as in high-rise buildings with observation decks (the Empire State Building comes immediately to mind). Thus, EIBASS concludes that WCAI's rosy picture is intentional. Apparently WCAI thinks it can be unconcerned about interference to other service's spectrum (OSS), such as grandfathered TV BAS Channel A10; thus, EIBASS will continue its rebuttal filings.

4. Indeed, WCAI makes the flat claim, at page 6 of its comments, that "nomadic devices would not cause harmful interference under the OOB limits proposed in the FNPRM." This is a promise that WCAI is in no position to make or enforce. A two-watt equivalent isotropic radiated power (EIRP) nomadic device, such as a hand-held 4G phone transmitting from an observation deck just below and ENG-RO site, is entirely capable of causing interference; and intermittent, random interference, at that. WCAI wouldn't tolerate that for its operations, and should not expect others to, either.

5. In its February 18, 2003, *Second Supplement To A Proposal for Revising the MDS and ITFS Regulatory Regime*, a joint filing by WCAI, the National ITFS Association (now the National EBS Association) and the Catholic Television Network (CTN, a major holder of ITFS (now EBS) licenses), in support of RM-10586, which became WT Docket 03-66 and resulted in the re-farming of the 2.6 GHz MMDS/ITFS band, it was stated that:<sup>1</sup>

However, recognizing that more stringent limits of out-of-band emissions may be necessary in cases where adjacent licensees deploy non-compatible technologies, they also proposed that under certain circumstances a licensee operating outside the MBS [mid-band segment] should be required to provide greater attenuation.

and

The challenge in developing rules has been to provide for maximum technology flexibility, while at the same time avoiding the

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<sup>1</sup> Second Supplement, at pages 1-2.

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imposition on all licensees of interference-protection restrictions that may only be necessary in worst-case situations.

6. Thus, the current  $43 + 10\log_{10}(\text{TPO}_{\text{watts}})$  OOB suppression requirement was already a compromise from the  $67 + 10\log_{10}(\text{TPO}_{\text{watts}})$  suppression requirement for BRS/EBS stations in certain circumstances,<sup>2</sup> and far less stringent than the  $76 + 10\log_{10}(\text{TPO}_{\text{watts}})$ ; the  $80 + 10\log_{10}(\text{TPO}_{\text{watts}})$ ; and the  $93 + 10\log_{10}(\text{TPO}_{\text{watts}})$  suppression requirements for fixed Part 27 Upper 700 MHz Band transmitters; for 2,320–2,345 MHz Part 27 stations; and for 2,305–2,315 MHz Part 27 stations, respectively. Further, ENG operations and 4G would have to be considered the “poster child” of “non-compatible technologies,” so the adopted less-strict  $43 + 10\log_{10}(\text{TPO}_{\text{watts}})$  emission mask was already problematic. EIBASS believes that it was only because of the delays of former MDS1 stations deploying on BRS Channel 1 that chronic interference has not been caused to grandfathered TV BAS Channel A10 operations. But that fortunate lull now appears to be coming to a close. For example, BRS1 Station WOF49 in Chicago just filed, on July 12, that it has commenced operation on its new BRS1 channel; EIBASS is in the process of checking with the two grandfathered TV BAS Channel A10 stations in that market, to see if they are receiving interference to their ENG operations. Unfortunately, that information is not available in time to be included in these reply comments, but will probably be submitted in follow-up EIBASS *ex parte* comments.

7. The WCAI comments then compound the interference issue by referring to the existing OOB requirement as “stricter OOB limits.”<sup>3</sup> They are not. They are the *existing* OOB limits, and WCAI wants *relaxed* OOB limits, but is playing word games to try and convince the Commission to wrongly see the proposal as a tightening of OOB limits, when it is exactly the opposite.

8. EIBASS has to again wonder if the WCAI Engineering Committee has had any input to the WCAI comments, since the WCAI Engineering Committee web site<sup>4</sup> shows the WCAI OOB comments not under the “Committee Documents” but rather under “Government Advocacy,” and the signature page of the WCAI comments does not include the Chairman of the WCAI Engineering Committee (or any WCAI Engineering Committee member).

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<sup>2</sup> See Section 27.53(l)(4) of the FCC rules.

<sup>3</sup> WCAI comments, at page 5.

<sup>4</sup> See <http://www.wcai.com/engineering-committee.html>.

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**II. IPWireless Comments**

9. The IPWireless comments document that, contrary to the claims of WCAI, Motorola, and Alcatel-Lucent, it is economically feasible to build a handset meeting the current OOB requirements, because IPWireless demonstrates that it has such handsets now. Indeed, IP Wireless states:

Claims that IPWireless does not commercially supply fully compliant 3GPP Release 8 LTE supporting 20 MHz operation were subsequently refuted in communication with the FCC. [Footnote 3].

Footnote 3: Letter from Roger Qualyle, CTO, IPWireless, Inc. to Marlene H. Dortch, Secretary, FCC, filed December 21, 2010.

10. IPWireless even provides photographs of its OOB-compliant devices, in Figures 1 and 2 to its comments. Thus, the claims by WCAI, Motorola and Alcatel-Lucent that it would be “difficult” or “cannot easily be met,” would appear to be mistaken, and are not an excuse for BRS stations to cause increased interference to TV BAS Channel A10 stations, and possibly even TV BAS Channel A9, stations.<sup>5</sup>

11. EIBASS notes that the IPWireless WT 03-66 comments are consistent with the inconvenient truth 2003 WCAI/NIA/CTN *Second Supplement* comments, by stating:

While a filtering approach, in line with the Commission’s rules for a tightening base station emission mask if high levels of interference are reported, would alleviate interference related to the first two interference conditions, it provides no benefit to the third and fourth interference scenarios. Though base stations do operate with significantly more power than UE, the statistical nature of interference does not preclude harmful levels of interference from a UE to be BS or UE. A relaxed mask would require larger separation between interfering UE and victim receivers to avoid interference.

and

Annex IV of the report describes TDD synchronization as an example of a possible coordination that could relax either guard band requirement or Block Edge Mask (BEM)... However, given the disparate technologies in the band and varying traffic usage requirements, such synchronization would be unlikely to occur.<sup>6</sup>

12. Thus, EIBASS submits that there is ample reason to believe that relaxed OOB for BRS would be an interference threat to 2.5 GHz TV BAS operations. Although the Alcatel-Lucent comments state that “it is important that primary licensees receive adequate protection in the

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<sup>5</sup> See Figure 2 to the July 7, 2011, EIBASS comments.

<sup>6</sup> IPWireless comments, at pages 4–5.

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event harmful interference occurs,” EIBASS submits that a *post hoc* solution is rarely good spectrum policy, and places the burden of finding and documenting the interference on the supposedly protected incumbent user. It is wrong to place this burden on existing TV BAS licensees (or any existing licensee, for that matter). Until and unless the Commission reforms the 2.5 GHz TV BAS band as first suggested by SBE in 2004, in the IB Docket 02-364 rulemaking, a relaxation of the BRS OOB limits cannot be justified.

13. Similarly, TIA states “TIA stresses that the Commission should ensure that it provides all affected licensees necessary protection from harmful interference, particularly uses that involve protection of health, life and property.” Because ENG operations can (and often do) fall into the “protection of health, life and property” category, by alerting the public in a timely manner to imminent threats and thus also reducing the likelihood of panic, the “necessary protection” urged by TIA needs to be more than just lip service at the FCC.

### **III. Globalstar Comments**

14. EIBASS has mixed feelings about the Globalstar comments; on the one hand, Globalstar argues (correctly, in EIBASS’ view) that relaxed OOB would cause increased interference to its MSS ATC operations at 2,483.5–2,500 MHz. But Globalstar fails to mention the far more severe problem of causing interference to co-primary TV BAS Channel A10 stations, also at 2,483.5–2,500 MHz. Since indefinitely grandfathered A10 stations were there first, Globalstar is obligated to protect those earlier-in-time stations, but so far has refused to do so. Globalstar wants its S-band MSS ATC spectrum to be protected from adjacent-band BRS operations, but apparently sees nothing wrong with ignoring and interfering with co-channel BAS A10 operations.

15. Indeed, MSS ATC has the dubious honor of managing to cause interference from two MSS ATC bands at the same time: L-Band MSS ATC interference to GPS, and S-Band MSS ATC interference to TV BAS Channel A10. EIBASS notes that its recent July 8, 2011, comments to ET Docket 10-142 (“MSS Flexibility”) documented a case of harmful interference to Chicago A10 operations by Open Range, operating on a subset of the MSS ATC S-band.<sup>7</sup>

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<sup>7</sup> Pursuant to Special Temporary Authority (STA) granted by the Commission’s International Bureau (IB), Call Sign S2115, FCC File Number SAT-STA-20110106-0003, granted January 20, 2011.

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**IV. Summary**

16. The OOB limits for BRS/EBS stations should not be relaxed, or at least not relaxed for any BRS operations within 20 MHz of the lower band edge (*i.e.*, below 2,516 MHz), until and unless the 2.5 GHz TV BAS band has been re-farmed as first proposed by SBE in its November 19, 2004, comments, and reaffirmed in its July 11, 2005, comments, to IB Docket 02-364.<sup>8</sup>

**List of Figures**

17. The following figures or exhibits have been prepared as a part of these WT Docket 03-66 Fourth NPRM reply comments:

1. Figure showing the 2004 SBE-proposed re-farming of the 2.5 GHz TV BAS band.

Respectfully submitted,

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July 22, 2011

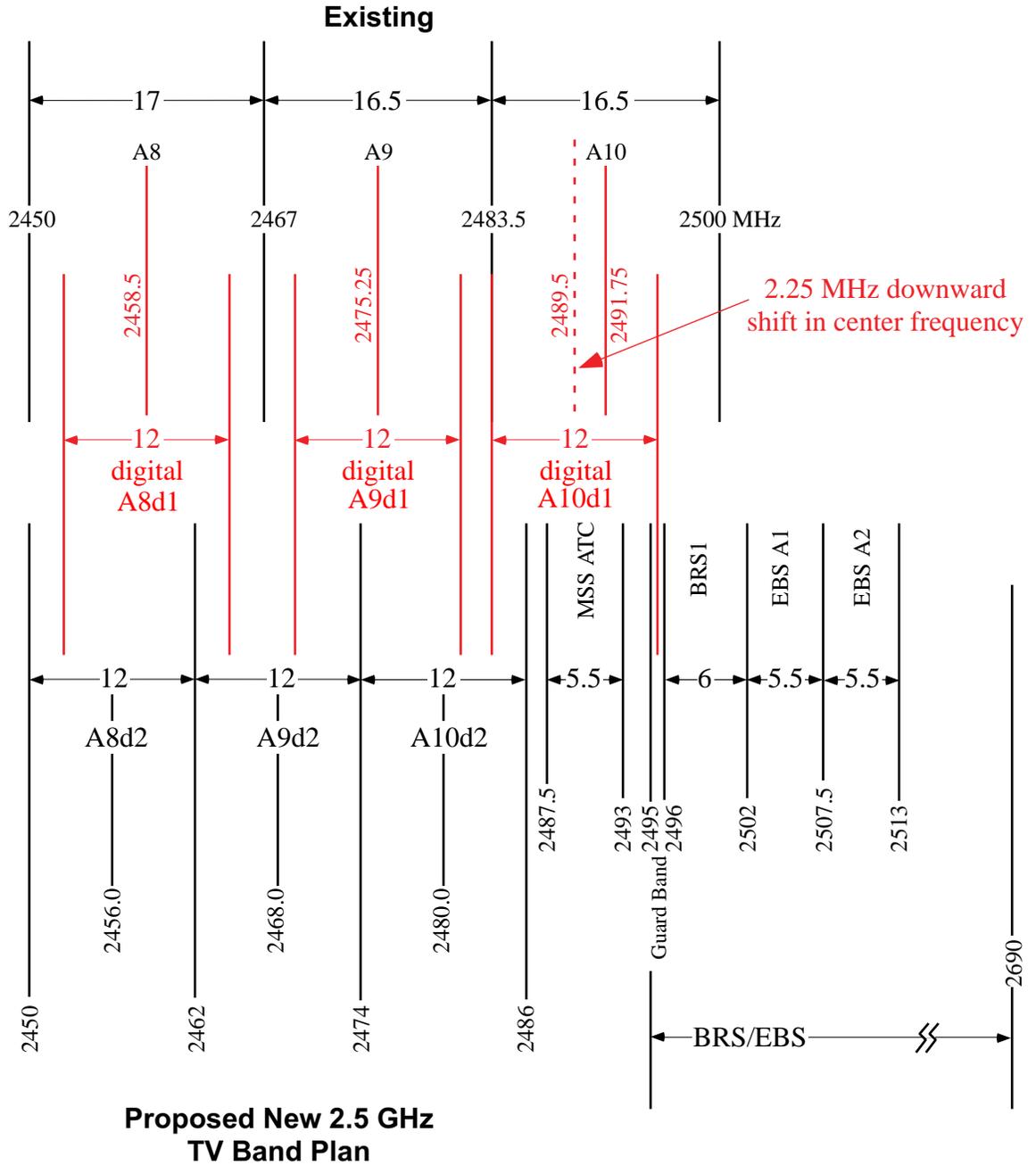
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<sup>8</sup> November 19, 2004, *SBE Filing in Support of the October 27, 2004, Nextel Filing Regarding the September 8, 2004, SBE Petition for Reconsideration of the IB Docket 02-364 R&O*, and the July 11, 2005, *SBE Response to Reply of Globalstar to the Informal Objection of the Society of Broadcast Engineers, Inc.* IB Docket 02-364 concerned Mobile Satellite Service (MSS) Ancillary Terrestrial Component (ATC) stations at 1.6 GHz (L-Band) and 2.4 GHz (S-Band).

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**Existing vs SBE-Proposed New 2.5 GHz TV BAS Band Plan**



All frequencies and bandwidths are in MHz.