

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

In the Matter of)
)
Amendment of Parts 25, 74, 78 and 101 of the Rules)
Regarding Coordination between the Non-Geostationary)
and Geostationary Satellite Orbit Fixed-Satellite) ET Docket No. 03-254
Service and Fixed, Broadcast Auxiliary and Cable)
Television Relay Services in the 7, 10 and 13 GHz)
Frequency Bands)
)

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 world wide, hereby respectfully submits its reply comments in the above-captioned Notice of Proposed Rulemaking (NPRM) relating to frequency coordination protocols between 7 GHz Mobile Satellite Service (MSS) feeder uplink and feeder downlink stations and 13 GHz MSS Gateway uplink stations, and 7 and 13 GHz TV Broadcast Auxiliary Service (BAS) stations.

I. Fixed Wireless Communications Coalition/SkyBridge Joint Comments

1. The jointly filed comments of the Fixed Wireless Communications Coalition (FWCC) and SkyBridge L.L.C. (SkyBridge) implore the Commission to not alter the county-based growth zone criteria these two parties have informally reached, and reported to the Commission in various *ex parte* filings to the predecessor ET Docket 98-206 rulemaking. The goal of the FWCC/SkyBridge proposal is to make any county with 30 or more 10.7–11.7 MHz fixed links a "growth zone" county, where a precluding Gateway uplink could only locate if it was willing to accept certain "additional obligations" which the joint filing states "...may prove to be a sufficient disincentive that the NGSO FSS operator would choose to not build a Gateway in a particular Growth Zone." The joint filing admits that a county-based criteria is not perfect, but argues that no criteria will be perfect, and so the Commission should stick with the county-based criteria proposed by FWCC/SkyBridge.

2. Since the FWCC/SkyBridge comments only propose applying a county-based growth zone criteria to POFS/common carrier links in the 10.7–11.7 GHz band, and not to any Broadcast

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Auxiliary Services (BAS) bands, SBE does not oppose that approach for the 11 GHz band. However, SBE feels that a county-based definition is a poor choice given the wide variability of county sizes throughout the USA. There are 3,489 counties/parishes in the United States. For the contiguous United States, they range in land area from only 25 square kilometers for Bristol County, Rhode Island, to 20,062 square kilometers for San Bernardino County, California. Indeed, the three largest counties in the contiguous United States, San Bernardino, Coconino County in Arizona at 18,617 square kilometers, and Nye County in Nevada at 18,147 square kilometers, are each larger than the land areas of nine states: Connecticut, Delaware, Hawaii, Maryland, Massachusetts, New Hampshire, New Jersey and Rhode Island. Thus, a preclusion area– or growth zone– model based on small counties typical in eastern states, and large counties typical in western states, appears to SBE to be arbitrary and unrealistic. For this reason SBE proposed a preclusion, or "keep away" model based on 150-km radius circles centered on the top-100 TV markets. Propagation of radio frequency energy is unaffected by man-made county and state boundaries, but is bound by the laws of physics based on distance. This strikes SBE as a far better metric than the county model proposed by FWCC/SkyBridge.

3. Accordingly, as long as the Commission does not extend a county-based metric to the distance-based preclusion zone proposed by SBE for the 13 GHz TV BAS band, SBE has no objection to what is in SBE's opinion the overly complicated and potentially faulty county-based criteria now proposed for permanent use in the 11 GHz band.

II. SkyBridge Solo Comments

4. In its solo comments, SkyBridge states "Gateways will be large, easily-identified facilities, and generally will not be located in urban areas." It is the "generally" qualifier that makes SBE nervous. The Commission should mandate that no Gateway uplinks should ever be allowed within 150 kilometers of the top-100 TV markets. Because of the preclusive nature of Gateway uplinks, SBE feels this approach would be consistent with good engineering practice and accepted standards for interference control.

5. At page four of its solo comments, SkyBridge states "local BAS frequency coordinators should be able to assist in identifying unlicensed receive-only BAS sites used in connection with mobile transmitters." SBE wishes to point out that electronic news gathering (ENG) receive only sites are not "unlicensed," but should be thought of as "undocumented," at least within the terms

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of the Commission's Universal Licensing System (ULS). ENG RO sites are always used in connection with *licensed* TV Pickup stations, and so in SBE's view are not "unlicensed." They are, however, "undocumented" in the ULS because of the Commission's refusal, at least so far, to modify the ULS to truly make it a "universal" filing system that can accommodate the reality of BAS ENG operations. Allowing broadcasters to document the often multiple ENG RO sites (and receiving antenna heights, which are often substantial) used by *licensed* TV Pickup stations is a logical step the FCC could take to help.¹

6. There is another consideration that SkyBridge seems to be overlooking. The very nature of ENG is that a transmitter can be located anywhere within the parent TV station's market, and may include airborne mobile operation from helicopters or blimps. Regardless of the documented or undocumented status of receive sites, link viability depends on both transmit and receive locations. This inescapable engineering truth cannot be ignored. SBE believes that while mobile transmitters will always be by their inherent nature spectral "wild cards." Allowing the documentation of receive site locations and heights in the ULS will at least make the game more fair for all players.

III. Boeing Company Comments

7. Boeing claims that "...where BAS/CARS licensees routinely operate are highly predictable, such as stadiums, fair grounds, airports and government facilities." SBE disagrees that mobile or portable BAS/CARS operations are ever "highly predictable." But, while BAS/CARS mobile and portable operations are common around certain venues, it is the highly unpredictable nature of the location of breaking news events that is the far bigger issue. Although the bulk of ENG operations are presently at 2 and 2.5 GHz, the decreased availability of those bands will only

¹ It should be noted that SBE made just such a proposal in its comments to ET Docket 01-75, but this proposal was rejected because it was supposedly outside the scope of that rulemaking. Since the purpose of the ET Docket 01-75 rulemaking was the general updating and harmonization of the BAS Rules, SBE felt that its proposal to modify the ULS to allow broadcasters to document ENG RO sites used by existing, licensed, TV Pickup stations was entirely within the scope of the ET 01-75 rulemaking. For that reason the registering of ENG-RO sites was included in an SBE Petition for Partial Reconsideration of the ET Docket 01-75 Report & Order (R&O), but that reconsideration petition was also rejected by the Commission. The Commission suggested that SBE file a separate Petition for Rulemaking proposing to create the ability to document ENG RO sites in the ULS. If certain in-progress negotiations with FCC staff to informally accomplish this goal do not bear fruit, SBE will then likely do just that: file a Petition for Rulemaking. But, SBE has to wonder how much simpler it would have been to have adopted this SBE ET 01-75 suggestion in the first place.

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increase the "overflow" use of ENG applications to the 7 and 13 GHz TV BAS bands. It is that use that is, by the very definition of what ENG has to be if it is to remain a viable and important service, totally unpredictable.

8. Boeing states that "Satellite earth station operators can work cooperatively with television stations in neighboring communities to educate operators of ENG equipment regarding the specific spectrum sharing agreements that exist between the parties." This suggests to SBE that Boeing might not understand the "first in time" principal spelled out in the ET Docket 98-142 *Report and Order* and the ET Docket 98-142 *Memorandum Opinion and Order*, namely that a later-authorized station has to protect the operation of an earlier-authorized station. Thus, any BAS TV Pickup stations already authorized to operate in the area where an MSS uplink station might imprudently decide to locate would not be required to protect any downlink receivers. To make matters potentially more risky from the point of view of MSS operators, uplink transmitters would have to ensure that they did not cause interference to earlier-authorized TV Pickup operations. As stated in our initial comments to this rulemaking, SBE would expect that the operators of the earlier-authorized, or "grandfathered" ENG equipment would make every effort to avoid interference to MSS downlinks, and, of course, to notify the operators of MSS uplinks when any operation of these TV Pickup stations with "seniority rights" might require the later-in-time MSS uplink to temporarily cease operation. Of course, the licensees of the TV Pickup stations authorized after the licensing of the MSS uplink or downlink facility would have no grandfather rights, and would have to protect the MSS downlink receivers, and accept any interference from MSS uplink transmitters.

9. Thus, SBE requests that the R&O to this rulemaking re-affirm the earlier-in-time policy that the Commission adopted in the ET Docket 98-142 rulemaking, so Boeing Satellite Systems, Inc. and all other MSS uplink operators will clearly understand and take into consideration this critical FCC-mandated ground rule.

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IV. Summary

10. An MSS uplink/downlink keep-away, or "growth zone" system, based on a uniform distance from the top-100 TV markets is a much better metric to ensure that MSS uplinks or downlinks are not sited where they would have a serious preclusive impact to terrestrial operations. The model proposed by FWCC/SkyBridge ignores that counties can vary in their size by a factor of nearly 100 to 1. If a county-based approach works for FWCC/SkyBridge in the 11 GHz band SBE has no objection to such an approach. But SBE does wish to make it clear that it vigorously opposes using a county metric for the 13 GHz TV BAS band. The R&O to this rulemaking should re-affirm the "first in time" seniority rights of earlier authorized co-channel and co-equal stations, so that there will be no confusion by any MSS uplink operator as to their legal protection obligations and accepting the risk of interference from stations that pre-date the establishment of the MSS downlink.

Respectfully submitted,

Society of Broadcast Engineers, Inc.

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