

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

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Federal Communications Commission  
Office of Secretary

In the Matter of )  
)  
Amendment of Part 74 of the FCC Rules )  
To Adopt Minimum Antenna Performance Standards )  
for 950 MHz Subpart E Aural BAS Stations )  
)

RM No. \_\_\_\_\_

To: The Commission

**Petition for Rulemaking**

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 this Petition for Rule Making to adopt minimum antenna performance standards for 944.0–952.0 MHz Part 74 Subpart E Aural Broadcast Auxiliary Service (BAS) stations.

**I. Reason for Petition**

1. The FCC Rules currently do not define minimum antenna performance standards for 950-MHz Aural BAS stations. Although Section 74.536(b) specifies Category A and Category B transmitting antenna performance standards for 18 GHz Aural BAS stations, 950 MHz Aural BAS stations are required to comply with the less restrictive Section 74.536(a) requirement in that the transmitting antenna be "directional," and "utilize the minimum beam width necessary, consistent with good engineering practice." As shown by the graphs in the attached Figure 1, the number of 950 MHz Aural BAS stations has increased five-fold in the last twenty years. Given the pervasive frequency congestion in the 950 MHz Aural BAS band that exists in many radio station markets, and the fact that 950 MHz Aural BAS stations are now subject to Section 101.103(d) prior coordination notice (PCN) frequency coordination protocols<sup>1</sup>, SBE believes that it is now appropriate for the Commission to adopt minimum antenna performance standards for such stations.

<sup>1</sup> ET Docket 01-75, effective October 16, 2003.

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## **II. Discussion**

2. Spectrum congestion in the 950 MHz Aural BAS band has increased in the last decade, and, in fact, it has increased in all of the BAS bands. To help minimize congestion, increase spectrum efficiency, and promote frequency re-use, the Commission has established comprehensive minimum antenna performance standards for 18 GHz fixed-link Aural BAS stations, as well as for 2, 2.5, 7, 13 and 18 GHz TV BAS fixed-link stations. SBE also notes that Private Operation Fixed Service (POFS) stations operating in the neighboring bands of 941.5–944 MHz and 952–960 MHz are subject to minimum antenna performance standards.

3. SBE has learned that Wireless Telecommunications Bureau (WTB) staff have begun interpreting Section 74.536(a) of the Aural BAS rules as not allowing a 950 MHz Aural BAS transmitting antenna with a half-power beam width (HPBW) of greater than 24°. The realization that a *de facto* minimum requirement exists within WTB suggests that the Commission understands that a problem exists, and is already taking informal corrective steps toward limiting the frequency congestion.

4. SBE believes that a better approach would be for the Commission to initiate a rulemaking, pursuant to the Administrative Procedures Act, to adopt minimum antenna performance standards for 950 MHz Aural BAS stations. Accordingly, SBE is submitting this petition, requesting the Commission to recognize the impact of growing congestion in the 950 MHz Aural BAS band, and the current need to apply minimum antenna performance standards similar to those enforced in adjacent bands, and generally conforming to the standards set for all fixed-link stations that require frequency coordination.

## **III. Proposal**

5. SBE proposes that the minimum antenna performance standards of Section 101.115(b) for 941.5–944 MHz POFS links be made applicable to 944.0–952.0 MHz Aural BAS stations. However, SBE proposes that these specifications only apply to the authorized polarization, so as to accommodate truncated-reflector antennas, commonly used by broadcasters in this band.<sup>2</sup> Furthermore, SBE proposes that the minimum antenna performance standards apply to both transmitting and receiving antennas, as an overly broad receiving antenna can be just as preclusionary and spectrum inefficient as an overly broad transmitting antenna.

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<sup>2</sup> Some truncated-reflector antennas meet the Part 101 Category A or Category B antenna performance standards in one polarization, but not the other; so long as a truncated-reflector antenna is being proposed for a polarization that meets the pertinent antenna category, its use should be allowed.

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6. So as to minimize any hardship to existing licensees, SBE proposes that minimum antenna performance standards only apply to existing stations after a ten-year grandfather period,<sup>3</sup> or if a major-change modification to the existing station is made, whichever occurs first. However, in the event that a newcomer station demonstrates that upgrading the existing transmitting and/or receiving antenna with a compliant antenna<sup>4</sup> would allow a newcomer station to frequency coordinate a new link, then the existing station would be required to implement the upgrade, at its own expense.

7. To allow for special situations where physical (*i.e.*, structural), local zoning, or other restrictions do not allow the installation of an antenna large enough to meet Category A or Category B requirements (as appropriate), SBE proposes the same waiver language that exists in Section 74.643(d) of the TV BAS rules be applied; namely

As an exception to the provisions of paragraph (a) of this section, the Commission may approve antenna systems not conforming to the technical standards where a persuasive show is made that:

(1) Indicates in detail why an antenna system complying with the requirements of paragraph (a) of this section cannot be installed.

Under this approach, the burden of documenting why a Category A or Category B (as appropriate) transmitting or receiving antenna can't be used falls on the applicant requesting a sub-standard antenna, but leaves open the possibility of a non-Category A or non-Category B (as appropriate) antenna where the proper justification can be made. This exception provision would also apply if a newcomer station requests an existing licensee to upgrade its transmitting or receiving antenna; if the existing licensee can demonstrate that such an upgrade would not be possible due to physical, local zoning, or other restrictions, then the existing licensee would not be required to implement the upgrade, even if the newcomer station is willing to pay all reasonable and prudent costs associated with the antenna upgrade.

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<sup>3</sup> As was done for the imposition of minimum antenna performance standards for Part 74 Subpart F TV BAS fixed link stations, in General Docket 82-334.

<sup>4</sup> A compliant antenna is defined as an antenna meeting Category A performance standards in frequency congested areas, or meeting Category B performance standards in non-frequency congested areas, using the same "frequency congested" area criteria given in Sections 74.641(b)(1 and 2) of the TV BAS Rules.

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**IV. Summary**

8. With the advent of formalized PCN protocols for 950 MHz Aural BAS stations and the increased frequency congestion of the 950 MHz Aural BAS band in many radio markets, SBE believes that it is time for the Commission to finally harmonize the Part 74 Subpart E 950 MHz Aural BAS rules with those applying to 940 and 960 MHz POFS stations, and to fixed-link TV BAS stations, and adopt minimum antenna performance standards for 950 MHz Aural BAS stations.

**List of Figures**

9. The following figures or exhibits have been prepared as a part of this Petition for Rulemaking:

1. Graphs showing the growth of 950 MHz Aural BAS stations.

Respectfully submitted,

Society of Broadcast Engineers, Inc.

Ray Benedict, CPBE  
SBE President

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

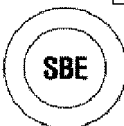
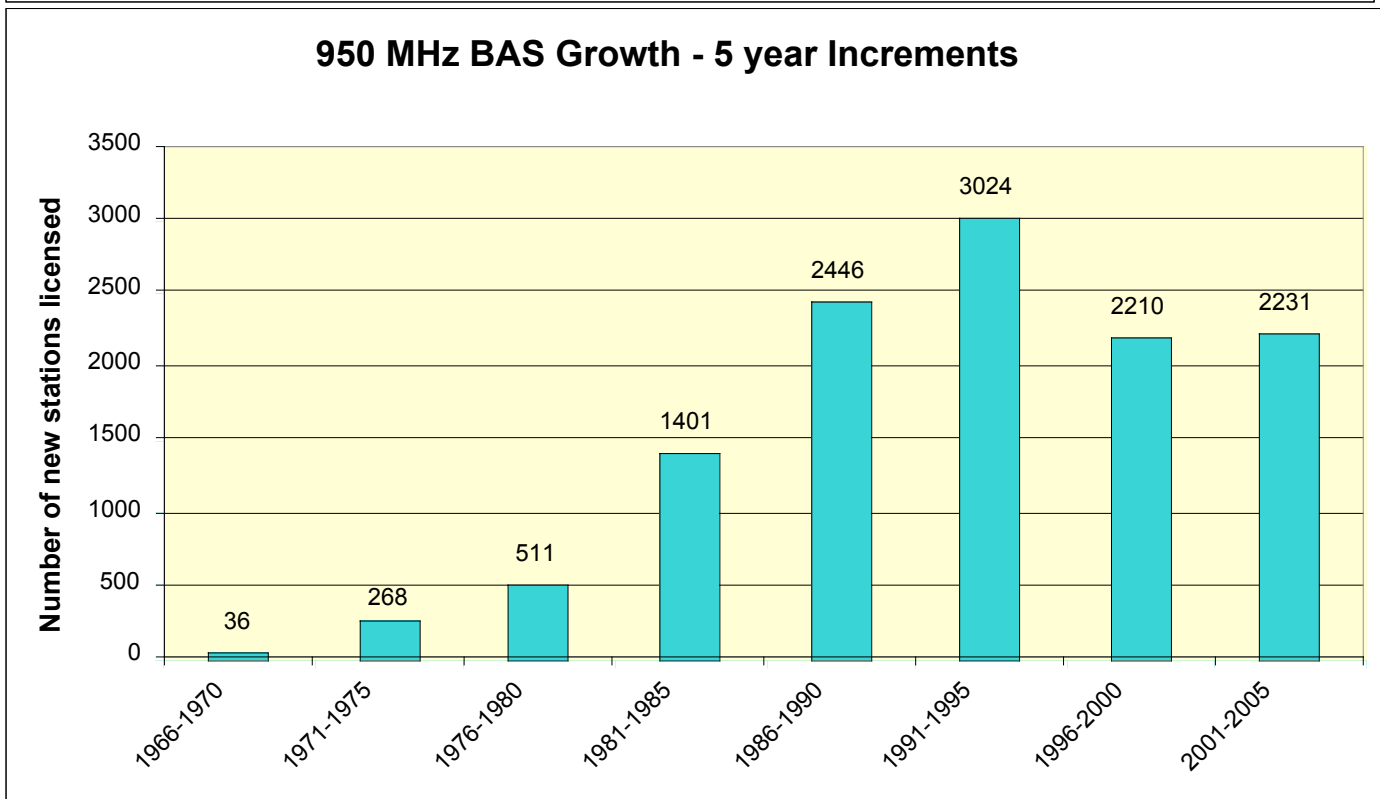
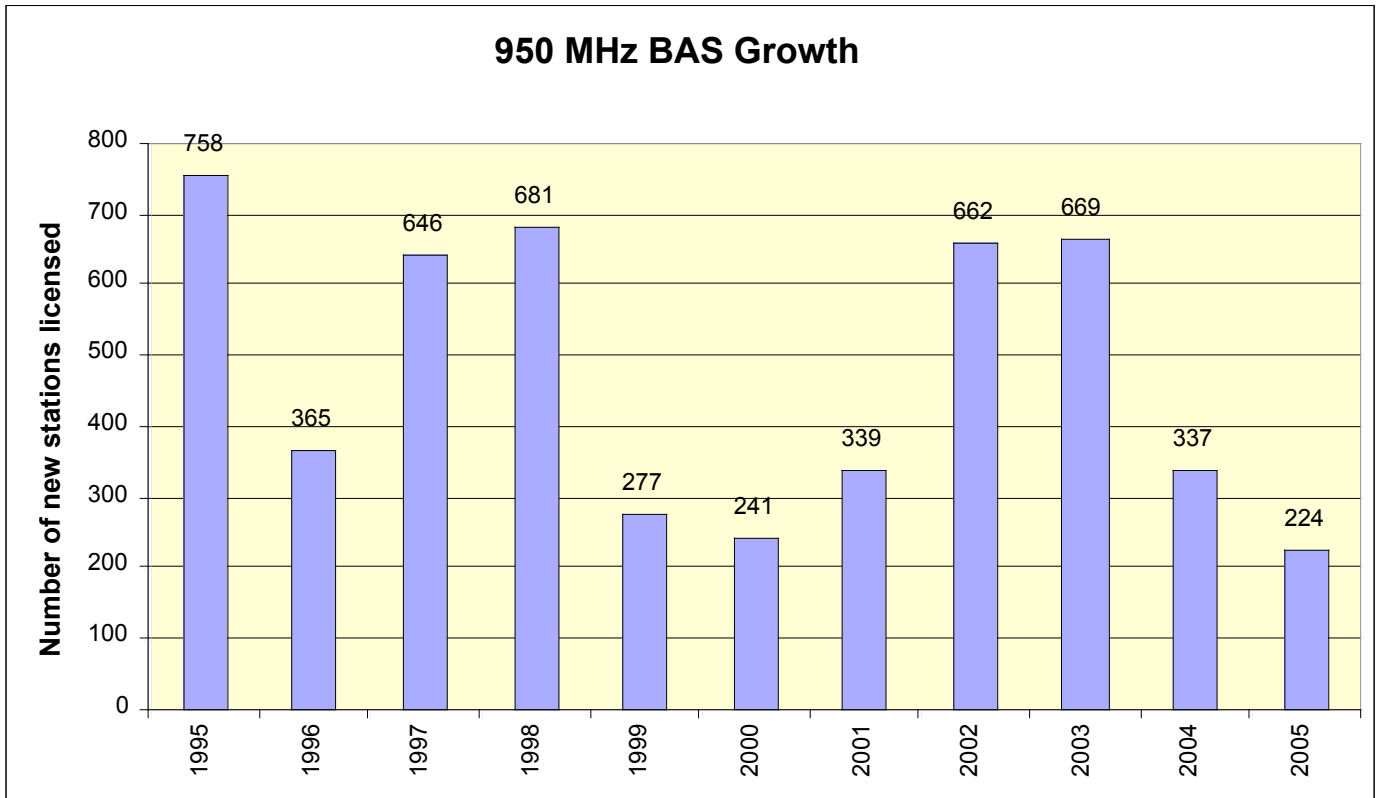
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September 14, 2005

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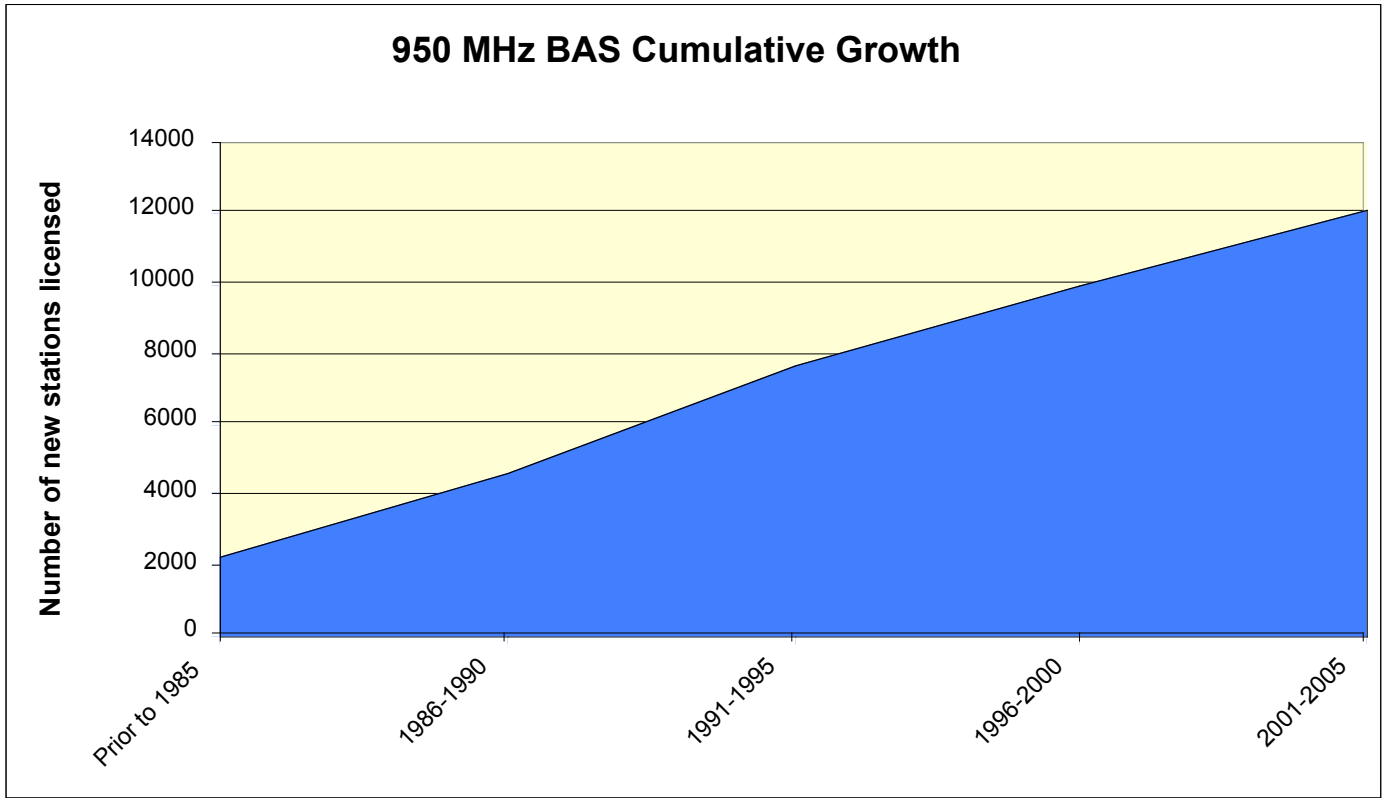
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## Number of 950 MHz Aural BAS Stations



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All charts based on data obtained from the ULS.

