

**SOCIETY OF BROADCAST ENGINEERS  
FCC LIAISON COMMITTEE**

**ELECTRONICALLY FILED**

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April 4, 2003

Marlene H. Dortch  
Office of the Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Dear Ms. Dortch:

SBE hereby files a Request for Stay of the PCN frequency coordination requirement for 950 MHz Aural BAS fixed point-to-point stations, and for 2.5, 7 and 13 GHz TV BAS fixed point-to-point stations, scheduled to go into effect on April 16, 2003, as a result of the publication of the November 13, 2002, Report and Order to ET Docket 01-75 (Updating of the Part 74 BAS Rules) in the Federal Register on March 17, 2003.

Sincerely,

/s/ **Dane E. Ericksen**

Dane E. Ericksen

Enclosure

cc: All SBE FCC Liaison Committee members  
All SBE Officers and Directors

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

|   |   |                     |
|---|---|---------------------|
| In the Matter of                            | ) |                     |
|   | ) |                     |
| Revision of the Broadcast Auxiliary Service | ) | ET Docket No. 01-75 |
|   | ) |                     |
| Digital Modulation for all TV BAS Bands     | ) | RM-9418             |
|   | ) |                     |
| Low-Power Video Assist Devices              | ) | RM-9856             |

To: The Commission

**Request for Temporary Stay of the PCN Requirement**

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 request for a temporary one-year stay of the Prior Coordination Notice (“PCN”) frequency coordination requirement for most fixed, point-to-point Broadcast Auxiliary Service (“BAS”) stations adopted by the ET Docket 01-75 rulemaking.

**I. Filing is Timely**

1. The November 13, 2002, ET Docket 01-75 Report & Order (R&O) was not published in the Federal Register until March 17, 2003. Thirty days thereafter is April 16, 2003. Therefore this request for stay of the PCN requirement is timely filed.

**II. Temporary Stay of the PCN Requirement**

2. The R&O adopted a new requirement for 950 MHz fixed, point-to-point Aural BAS links, and for 2.5, 7 and 13 GHz fixed, point-to-point TV BAS links, to be frequency coordinated pursuant to Section 101.103(d) of the FCC Rules. This requirement will be referred to as the “prior coordination notice” or “PCN” method of frequency coordination. This is a more formalized method of frequency coordination than has previously been used by broadcasters. Implicit in such an approach is the availability of an accurate database for the dozen or so commercial frequency coordinating companies<sup>1</sup> to use when undertaking such PCNs. Even if local broadcasters elect to do their own PCN coordination, they may have an obligation not only to study the BAS links of their local fellow broadcasters, of which they are aware through the

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<sup>1</sup> The Commission’s Wireless Telecommunications Bureau (WTB) web page provides a list of 13 commercial microwave frequency coordinators (CMFCs). See <http://wireless.fcc.gov/microwave/coordinators.html>.

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ET Docket 01-75, Revisions to the BAS Rules**

SBE-sponsored frequency coordination process, but also more distant BAS links falling within the “keyhole” frequency coordination area defined in Section 3.4.4 of TIA/EIA Telecommunications Service Bulletin 10-F (“TSB10-F”), “Interference Criteria for Microwave Systems.” The attached Figure 1 shows the extent of the coordination areas, which in many cases will include BAS links now considered as too distant to require study under the present method of informal frequency coordination. Therefore, because SBE believes that BAS records in the Universal Licensing System (“ULS”) continue to be in such poor shape as to make impractical at this time the mandatory use of Part 101 PCN protocols, at least a one-year stay of the April 16, 2003, effective date of the PCN is being requested (more on this later).

3. Based on an independent analysis of all fixed link BAS records in the ULS by the firm of Cavell, Mertz, and Davis, approximately 6,163 stations out of 21,033 stations, or 29.3% of all fixed, point-to-point BAS stations in the ULS, are either lacking receive end geographic coordinates or have corrupted receive end geographic coordinates (*i.e.*, null coordinates or coordinates that are the same as the transmit coordinates). The attached Figure 2 includes maps showing all 2 GHz and all 7 GHz TV BAS stations in the United States with missing receive end coordinates; it should be readily apparent that the condition of BAS records in the ULS due to this defect alone means that the ULS is not yet ready to support a mandatory PCN requirement for fixed 950 MHz Aural BAS links or for fixed TV BAS links at 2.5, 7 or 13 GHz.

4. SBE asks for Commission guidance on exactly how broadcasters should go about adding missing receive end coordinates. Prior to 1974, FCC Form 313 did not even require broadcasters to provide the geographic coordinates of the receive end of a fixed, point-to-point link, or to provide information about the make and model of the receive antenna or its height. Although subsequent versions of FCC Form 313 corrected this oversight, this still means that 950 MHz Aural BAS fixed links, and 2, 2.5, 7, and 13 TV BAS fixed links granted prior to 1974 and which have never required modification since that date, are missing receive end coordinates, receiving antenna type, and receiving antenna height. Unfortunately, this scenario is most likely to apply to studio-to-transmitter link (“STL”) BAS licenses, meaning that the most important BAS license that a broadcaster has is the BAS license most likely to be missing this critical data.

5. SBE would hope that the Commission would not now expect broadcasters to file a new application, pay a new filing fee and possibly a PCN fee, to correct an omission in the database not caused by the broadcaster. If so, and assuming a cost estimated at \$3,820 per application (the \$120 filing fee, an estimated \$1,200 PCN fee, and an estimated \$2,500 worth of a broadcaster’s or consultant’s time to prepare and file the application), this would represent a

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burden of around \$23.5 million dollars placed on the broadcasting industry. Especially at a time when TV capital budgets have been stretched to their limit to build DTV facilities, and networks and broadcasters are seeing reduced advertising revenues and increased expenses due to war coverage, now would not be the time to place yet another stress on the broadcasting industry.

6. In the event a stay of the PCN requirement is not granted, SBE asks the Commission to provide guidance for how broadcasters and CMFCs should treat ULS records with missing receive end coordinates. Also, what type of receiving antenna and height should be assumed? At least a Category B dish and 61.0 meters (200 feet) AGL? SBE notes that no minimum antenna standards have ever been adopted for 950 MHz Aural BAS stations,<sup>2</sup> nor has a definition of “frequency congested area” ever been adopted for TV BAS stations.<sup>3</sup>

7. SBE finds it ironic that, while on the one hand the ET Docket 01-75 R&O found that the public interest would be served by extending PCN frequency coordination to fixed BAS links, the March 26, 2003, Memorandum Opinion and Order (“MO&O”) to CS Docket 99-250 gave as its primary reason for not granting the jointly filed Petition for Reconsideration of the Walt Disney Company (“Disney”) and the National Association of Broadcasters (“NAB”), the existence of “local frequency coordination.” The Disney/NAB petition had asked the Commission to reverse its decision to allow private cable operators (“PCOs”) and other multichannel video programming distributors (“MVPDs”) access to the 13.20–13.25 GHz portion of the 13 GHz TV BAS band,<sup>4</sup> previously reserved just for TV Pickup operations, on the grounds that such secondary use of 13.20–13.25 GHz by PCOs and MVPDs would interfere with broadcasters use of these frequencies for ENG. Specifically, Paragraph 9 of the MO&O stated:

Petitioners request that, should we not reverse our position on sharing in this band, we clarify how the sharing should be implemented, including requiring CARS licensees to provide a 24-hour contact person. Procedures are already in place. **Local frequency coordination is the primary means for ensuring that all licensees are aware of, and do not interfere with, other operations in their area.** This is especially important for mobile operations. Our rules provide that a CARS licensee must be able to discontinue operation at any time and have personnel available, including a contact, who can do that.

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<sup>2</sup> SBE petitioned the Commission to adopt minimum antenna standards for 950 MHz Aural BAS links on January 23, 1990, but this petition was dismissed without action on November 4, 1991, without a rule making (“RM”) or docket number ever being assigned.

<sup>3</sup> SBE petitioned the Commission to adopt criteria for “frequency congested areas” for TV BAS links on February 27, 1990, and MM Docket 90-500 was assigned. However, the September 23, 1991, R&O ended up not adopting the SBE criteria, or any criteria, for “frequency congested areas” for TV BAS stations.

<sup>4</sup> SBE filed in support of the Disney/NAB petition.

## **SBE Request for Temporary Stay of the PCN Requirement ET Docket 01-75, Revisions to the BAS Rules**

Yet the ET Docket 01-75 R&O substitutes PCN frequency coordination for “local frequency coordination” for fixed links in the 13 GHz TV BAS band. This will assuredly impact the ability of local coordinators to coordinate 13 GHz mobile operations. Therefore, it appears that Cable Services Bureau will need to re-think its rationale for not granting the Disney/NAB petition.

8. A third problem with a mandatory PCN requirement at this time is the lack of industry consensus for what desired-to-undesired (“D/U”) ratios should be used between analog, hybrid analog-digital, and digital BAS links. SBE is not aware of any established criteria for minimum BAS-into-BAS, BAS-into-POFS (Private Operational Fixed Service), POFS-into-BAS, BAS-into-CARS (Cable Television Relay Service, formerly Community Antenna Relay Service), and CARS-into-BAS D/U ratios. Although Section 101.105(c)(2) of the POFS Rules specifies a default D/U ratio of 90 dB for co-channel interference and a default D/U ratio of 56 dB for adjacent-channel interference for cases where industry-accepted D/U ratios have not been developed, these are excessively conservative D/U ratios that few properly performing and existing BAS links could meet. For example, the BAS co-channel D/U ratio requirement is generally taken as 60 dB or better by broadcasters, and the first-adjacent channel D/U ratio is generally taken as 0 dB or better for analog-into-analog situations and 10 dB or better for digital-into-analog situations. Second and higher order adjacencies are typically not checked, on the rationale that these higher order adjacencies should always be a receiver solution. While such informal interference protocols have worked well for the present, locally-coordinated method of BAS frequency coordination, these criteria need to be formally recognized if PCN protocols are to become mandatory.

9. Section 101.105(c) of the FCC Rules makes reference to TSB10-F. SBE has purchased the most recent version of this document and finds that it is an almost 9-year old document (last updated in June, 1994), and does not find it to be particularly helpful. TSB10-F appears tailored to common carrier and POFS links with multiple voice channels, and not to BAS links carrying analog video with multiple audio subcarriers; or to the current generation of TV BAS studio-to-transmitter link (“STL”) radios with hybrid analog and digitally modulated signals in a single TV BAS channel; or to 950 MHz Aural BAS situations. Further, SBE notes that both TSB10-F,<sup>5</sup> and Section 101.105(c)(2) of the FCC Rules, are clear that use of TSB10-F is not mandatory.

10. Because the ULS currently can show only one set of coordinates for a fixed electronic news gathering (“ENG”) receive only (“RO”) site, whereas many broadcasters use multiple fixed ENG

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<sup>5</sup> TSB10-F, at Page vi.

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receive only sites, and because the ULS limits the height of the fixed ENG receive antenna to no greater than 6.1 meter (20 feet) AGL, whereas most fixed ENG RO antennas employ much greater heights, there is no way that a CMFC, unfamiliar with the local TV BAS environment, would be able to undertake a valid coordination based on just the ULS. Even assuming that a CMFC recognizes an obligation to consider fixed ENG RO sites, because Section 74.604(c) of the FCC Rules makes fixed link stations a higher-priority use than mobile use, a CMFC can't coordinate what it doesn't know about. Therefore, until such time as the ULS is amended to allow the entering of multiple fixed ENG receive only sites with their actual heights, a stay of the PCN implementation date is again warranted.

11. Accordingly, SBE asks that the effective date for the PCN portions of the ET Docket 01-75 R&O be deferred for at least a 12-month period, until April 16, 2004, or until 30 days after such time as the Chief of the FCC's Media Bureau ("MB") and the Chief of the Licensing and Technical Analysis Branch of the Public Safety and Private Wireless Division of the Wireless Telecommunications Bureau ("WTB") jointly issue a public notice stating that the database discrepancies for BAS licenses in the ULS have been corrected, whichever comes later. This will allow time for the Commission to complete improvements to the BAS records in the ULS,<sup>6</sup> and to allow time for broadcasters and the dozen or so commercial frequency coordinating entities to reach agreement on what interference criteria should be applied for PCN studies involving BAS stations.

### **III. Summary**

12. For all of these reasons, SBE believes that at least a one-year stay of the PCN requirement, and until the Commission issues a public notice certifying the accuracy of BAS records in the ULS, is both warranted and necessary. An incorrect license grant as a result of a PCN by a CMFC unfamiliar with local BAS usage and relying solely on the ULS could result in a radio or TV station leaving the air during a period of time when it is extremely important that the public

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<sup>6</sup> SBE recognizes that in the past WTB has issued public notices asking broadcasters to examine their BAS records in the ULS for accuracy, and to ensure that each such record has a proper parent station facility identification number, and that many BAS licenses in the ULS nevertheless continue to be "orphans;" that is, they show no associated parent broadcast station, broadcast network entity, or cable network entity. However, such requests occurred before the instant PCN decision. Now that a PCN requirement will ultimately be applied, broadcasters have a greater incentive to ensure that their BAS licenses in the ULS are up to date. Finally, in all fairness, SBE feels compelled to point out that asking each AM, FM and TV station in the country to take the time and effort to fix errors or omissions caused, in many cases, through no fault of their own, is a non-trivial burden that the Commission has placed on broadcasters. So SBE would hope that the Commission would cut broadcasters some slack, and allow a reasonable period of time for broadcasters to undertake this now critical review of their BAS license records in the ULS.

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receive accurate and up-to-date information. SBE would not want to see a major market radio or TV station going off the air, even temporarily, during a “red alert” situation because of a flawed grant that causes interference to the studio-to-transmitter link of an existing radio or TV station.

**List of Figures**

13. The following figures or exhibits have been prepared in support of this request for temporary stay of the PCN requirement:

1. Maps showing the TSB 10-F “keyhole” coordination areas
2. Map showing 2 and 7 GHz BAS links with missing ULS receive end coordinates.

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

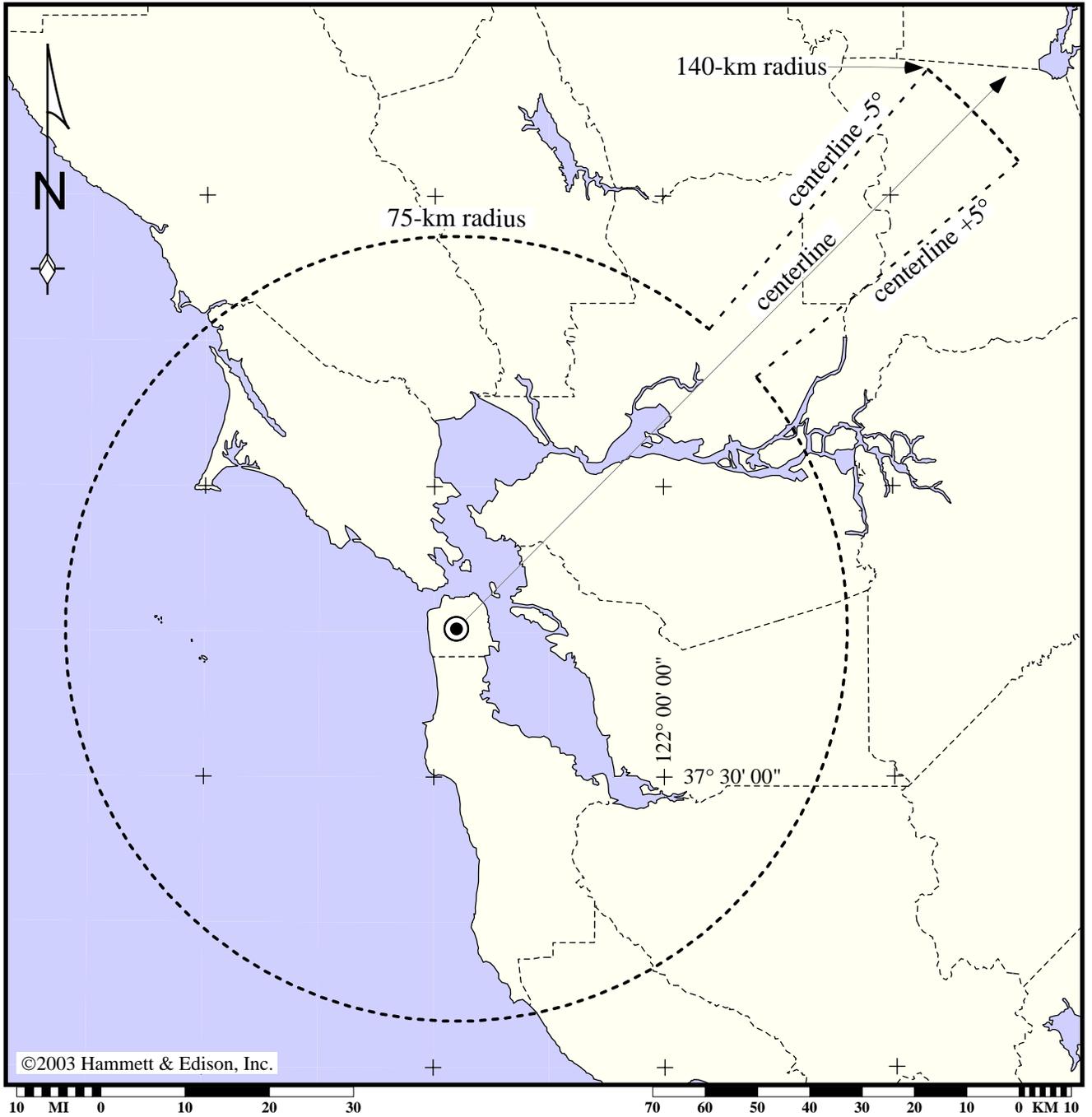
/s/ Christopher D. Imlay, Esq.  
General Counsel

April 4, 2003

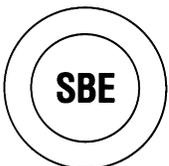
Booth, Freret, Imlay & Tepper  
14356 Cape May Road  
Silver Spring, Maryland 20904  
301/384-5525

**SBE Petition for Temporary Stay of the PCN Requirement  
ET Docket 01-75, Revisions to the BAS Rules**

**TIA/EIA TSB10-F Above 15 GHz Coordination Keyhole  
(Section 3.4.4)**



Lambert conformal conic map projection. Map data taken from Sectional Aeronautical Charts, published by the National Ocean Survey. Geographic coordinate marks shown at 30-minute increments.

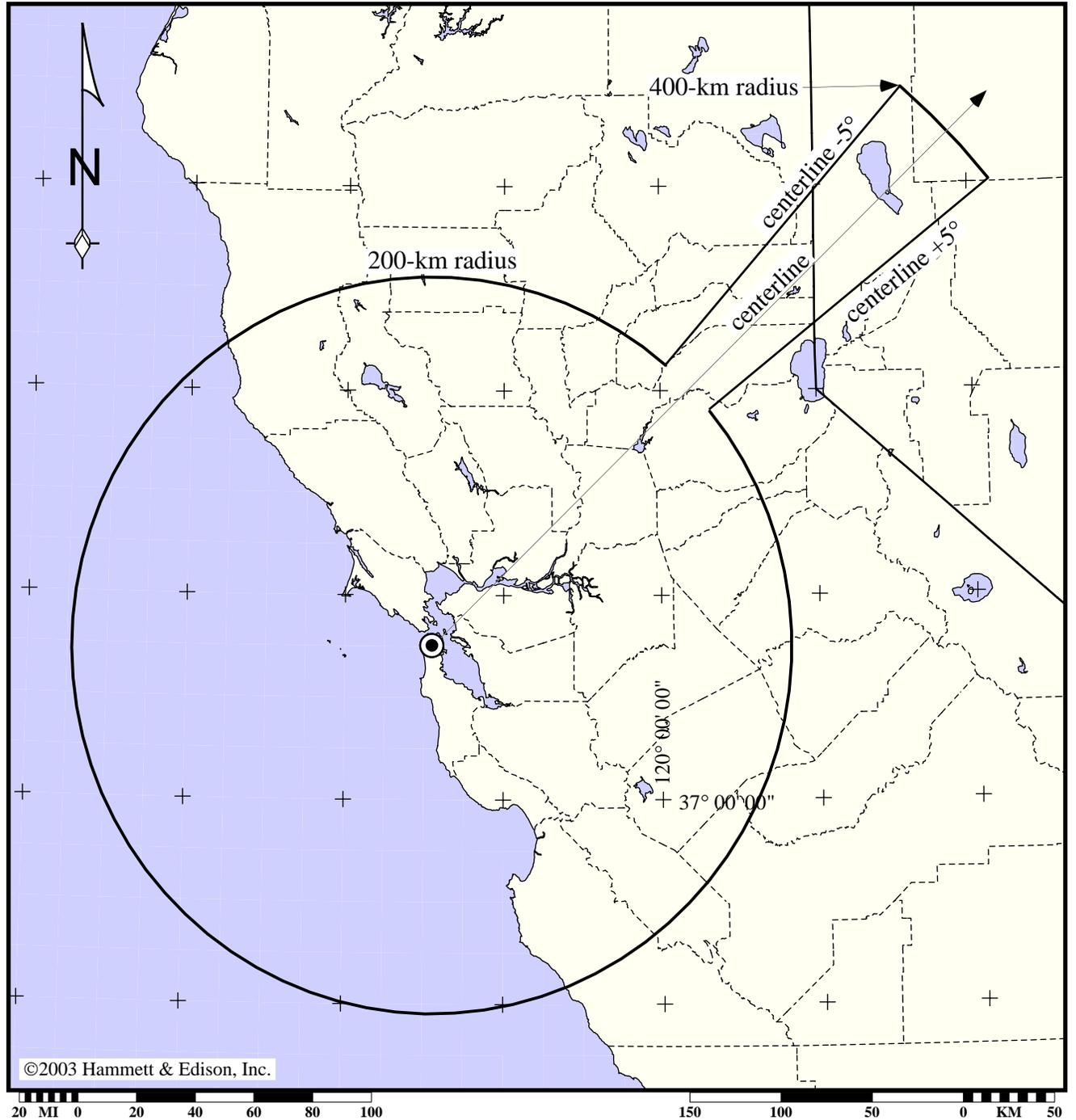


**SOCIETY OF BROADCAST ENGINEERS, INC.**  
Indianapolis, Indiana

030316.5  
Figure 1A

**SBE Petition for Temporary Stay of the PCN Requirement  
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**TIA/EIA TSB10-F Below 15 GHz Coordination Keyhole  
(Section 3.4.4)**



Albers equal area map projection. Map data taken from Sectional Aeronautical Charts, published by the National Ocean Survey. Geographic coordinate marks shown at 60-minute increments.

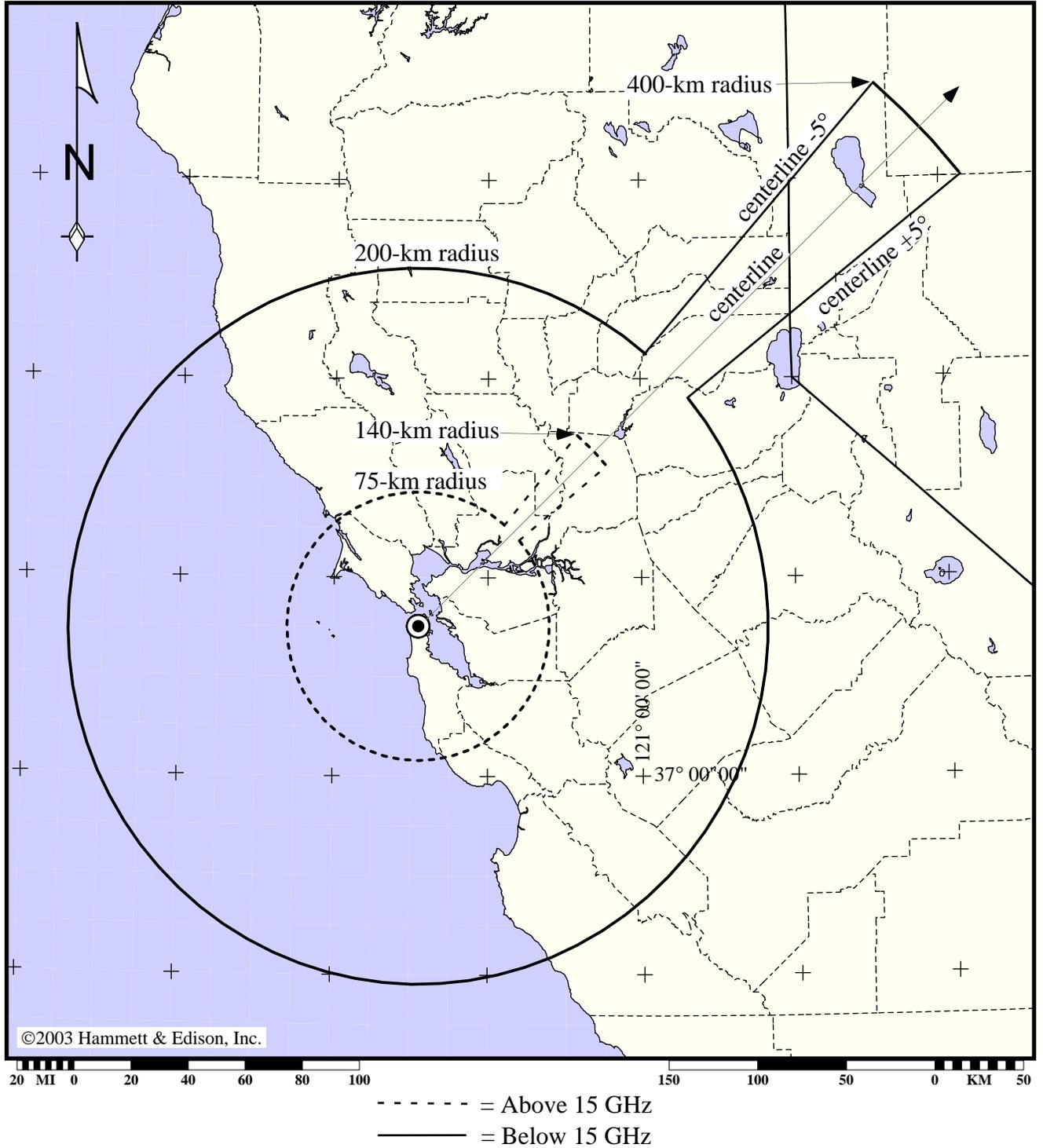


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030316.5  
Figure 1B

**SBE Petition for Temporary Stay of the PCN Requirement  
ET Docket 01-75, Revisions to the BAS Rules**

**TIA/EIA TSB10-F Coordination Keyholes  
(Section 3.4.4)**



Albers equal area map projection. Map data taken from Sectional Aeronautical Charts, published by the National Ocean Survey. Geographic coordinate marks shown at 60-minute increments.



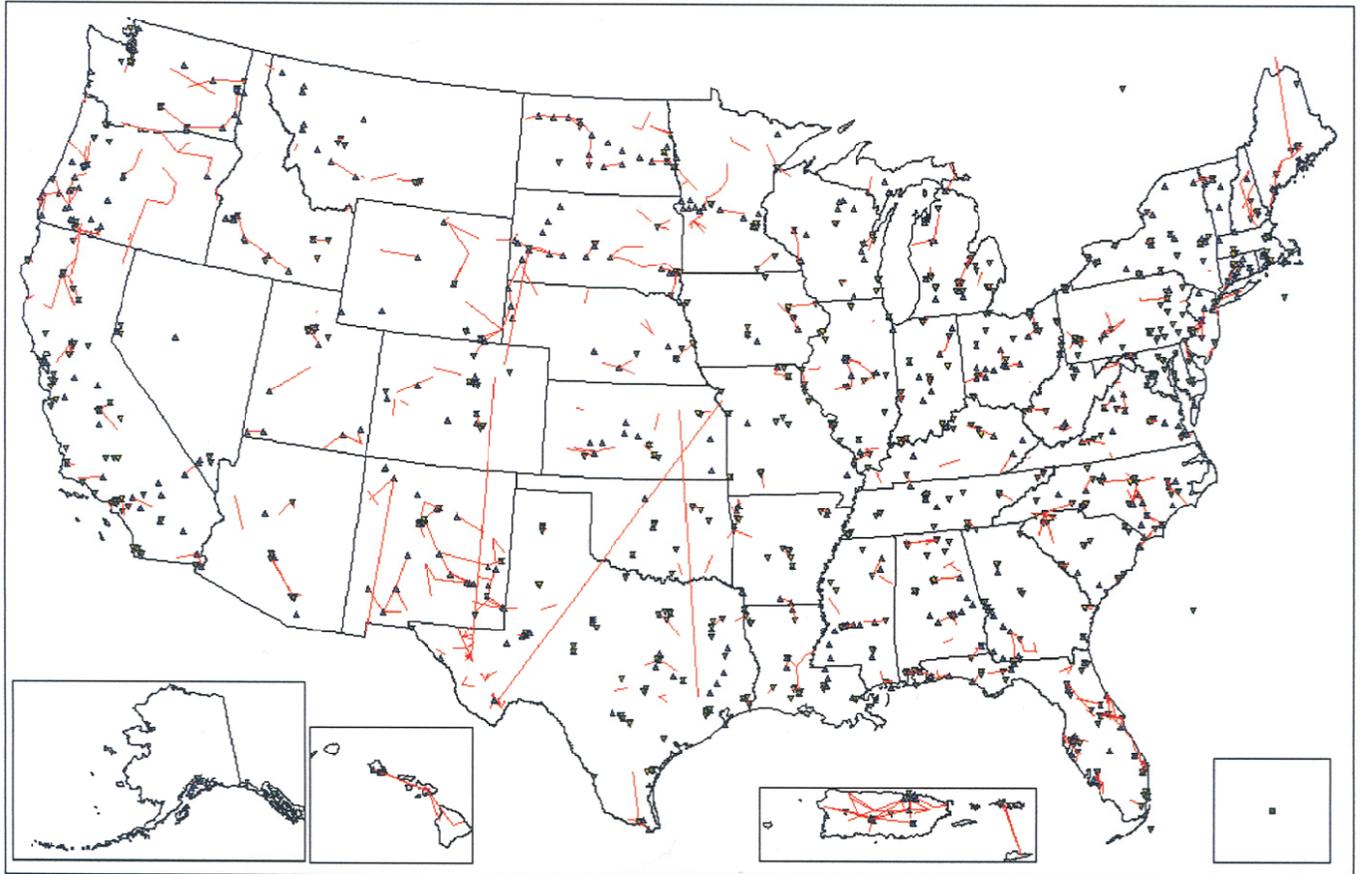
**SOCIETY OF BROADCAST ENGINEERS, INC.**  
Indianapolis, Indiana

030316.5  
Figure 1C

**SBE Petition for Temporary Stay of the PCN Requirement  
ET Docket 01-75, Revisions to the BAS Rules**

**Maps Showing 2 and 7 GHZ TV BAS Links with Missing Receive End Coordinates**

1990.0 to 2110.0 MHz



Freq Range: 1990.0 to 2110.0 MHz / Geo Area: World -- Lat(N/S) / Lon(W/E):  
FCC RadSvc: ALL / Class Of Station: ALL / Status: App, CP & Lic  
Meeting selection criteria: 10,018 links -- 0 areas. Source: ULS-Micro(2002.12.01)

## Map Legend

### Terrestrial Services

-  A Red Line represents the path between a fixed transmitter site and a fixed receiver site with up to four passive repeater sites if any are present.
-  A Blue Up Triangle represents the transmitter site of a fixed link where the corresponding receiver site is not defined by the assignment record.
-  A Green Down Triangle represents a base station around which mobile stations are assumed to operate.
-  A Blue Diamond represents a point-to-multipoint transmitting station with undefined fixed subscriber units.
-  A Green Diamond represents a point-to-multipoint receiving station with undefined fixed subscriber units.
-  A Yellow Down Triangle represents the base station around which mobile stations are assumed to operate. Because the assignment record did not have either TX or RX coordinates, the coordinates of this object are assigned the coordinates of the parent broadcast station.



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030316.5  
Figure 2A

**SBE Petition for Temporary Stay of the PCN Requirement  
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**Maps Showing 2 and 7 GHz TV BAS Links with Missing Receive End Coordinates**

 A Green Polygon defines the area of operation of temporary fixed or mobile stations, or market area.

Space Services

-  A Green Star represents a transmitting earth station in the fixed or mobile satellite service.
-  A Blue Star represents a receiving earth station in the fixed or mobile satellite service.

Broadcast Services

-  A Red Dot represents a full-service station: TV (NTSC), FM, or AM.
-  A Blue Dot represents full-service station: TV (digital).
-  A Green Dot represents a low power station: TV (Class A) or FM (Class A).
-  A Yellow Dot represents a translator: TV or FM.
-  A Black Dot represents a booster station: TV.

Density: Links per 0.5 degree box - Receiver End

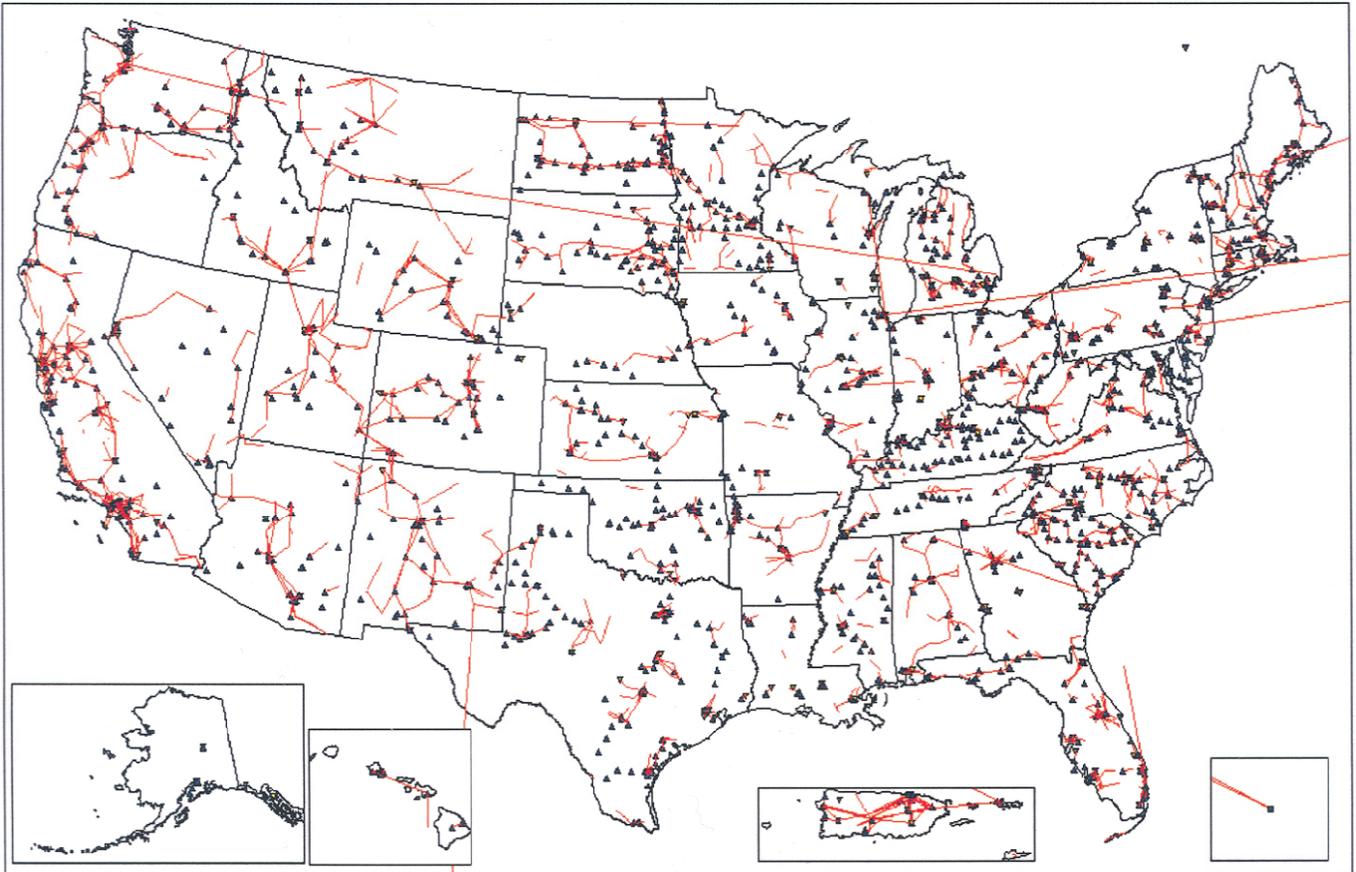
  $\leq 0$      1 to 10     11 to 20     21 to 40     41 to 80     81 to 81      $82 \leq$



**SBE Petition for Temporary Stay of the PCN Requirement  
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**Maps Showing 2 and 7 GHz TV BAS Links with Missing Receive End Coordinates**

6875 to 7125 MHz



Freq Range: 6875.0 to 7125.0 MHz / Geo Area: World -- Lat(N/S) / Lon(W/E):  
FCC RadSvc: ALL / Class Of Station: ALL / Status: App, CP & Lic  
Meeting selection criteria: 8,767 links -- 0 areas. Source: ULS-Micro(2002.12.01)

(Same map legend as Figures 2A and 2B.)



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Indianapolis, Indiana

030316.5  
Figure 2C