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

In the Matter of)
)
Allocation of Spectrum Below) ET Docket No. 94-32
5 GHz Transferred from Federal)
Government Use)

To: The Commission

REPLY COMMENTS OF THE
SOCIETY OF BROADCAST ENGINEERS, INC.

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SUMMARY

The Society of Broadcast Engineers, Inc. submits its reply comments in this proceeding. SBE is concerned that the Commission has, in the Notice in this proceeding, attempted to utilize an inapplicable economic model for spectrum allocations, instead of the Communications Act mandated public interest model. The Commission has not been accorded the jurisdiction to use spectrum auctions as a substitute for an evaluation of the public interest, convenience and necessity. The authority to use auctions for frequency assignments does not extend to allocations to various radio services, and it is not a substitute for a determination of the highest and best uses to be made by various radio services.

Allocations by "spectranomics" deprives the public of services such as public safety and Special Emergency Radio Services.

Nor should the Commission continue shared public safety and broadcast auxiliary operation. The Commission in this case should allot the 4.6 GHz segment exclusively to broadcast auxiliary use, to relieve serious overcrowding in the 2 GHz Electronic News Gathering (ENG) band.

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**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 in the United States, hereby respectfully submits its Reply Comments in the above-captioned Notice of Proposed Rule Making (NPRM) relating to the transferring of below-5 GHz federal government radio spectrum to private sector use.

I. Several Commenters Disagree with the Commission's Interpretation of its Mandate to Allocate Released Spectrum

1. The SBE did not file initial Comments in this proceeding, feeling at the time that the Proceeding had little to do with the technical considerations SBE considers being within its purview. SBE frequently files comments on technical matters, especially those concerning Part 73 (Radio Broadcast Services) and Part 74 (Experimental, Auxiliary, and Special Broadcast and Other Program Distribution Services) of the Commission's Rules. SBE now believes that several issues developed by Commenters to this Proceeding give

it not only the standing to file Reply Comments, but the duty to file.

2. What surprised SBE were several Comments that go to the very foundation of the Communications Act of 1934, the enabling engine for Federal spectrum management in the United States. The very meaning of the phrase, "in the public interest, convenience, and necessity. . ." has been challenged. SBE is concerned that we are marching toward a rewrite of the Communications Act where the phrase becomes, "In the public *economic* interest, convenience and necessity." This greatly troubles the SBE. SBE believes that broadcast engineers have a special feeling for their responsibilities under the Act during declared public emergencies.

3. Several Commenters mentioned directly the issues of public safety and public service. APCO, the County of Los Angeles ("LA County"), and the Los Angeles County Sheriff's Department ("LA Sheriff") reminded us how these ideas relate to current spectrum allocation issues.

4. SBE feels it must join with those Commenters who wish to remind all of us that the Communications Act of 1934 still carries provision for sufficient electromagnetic spectrum for both private sector interests and public safety/public service interests.

**II. The Commission Must Build an Emergency Lane
for the Information Superhighway**

5. APCO reminded the Commission that nothing in the Budget Reconsideration Act's language is supposed to change the basic

premises of spectrum allocation.¹ SBE believes that APCO not only successfully makes this case, but also brings out important facts of modern life. Public safety and public interest are now inextricably linked. Both can and should benefit from technology along with for-profit interests.

6. LA Sheriff mentions that its 11,000 plus employees are involved in the entire range of public safety activities. Interestingly, the LA Sheriff's Comments do not discuss its responsibilities under Chapter 2.68 of the Los Angeles County Code. That Chapter designates the Sheriff as the "Director of Emergency Operations" for what was called until recently the Emergency Broadcast System ("EBS") for the County during declared emergencies. SBE must make two points here:

- There is always a direct link between emergency management and local government during declared emergencies, and
- In Los Angeles County, the buck stops with the Sheriff.

7. In 1994 the LA Sheriff approved a plan offered by the *Telecommunications Advisory Group for the Emergency Preparedness Commission for the County of Los Angeles* ("TAG/EPC"). This plan envisions voice, data, and video links to the public from LA County, to provide emergency information during declared emergencies. An emergency where this resource would be used is an

¹ Comments of APCO, Page 2, Paragraph 2. ". . .The amended Act makes it clear that 'Nothing. . .in the use of competitive bidding shall (A) alter spectrum allocation criteria and procedures established by (the Communications Act).'"

event like the January 17, 1994, Northridge Earthquake. Unfortunately, spectrum to carry out important parts of this plan does not exist within current LA County allocations. Radio channels now in use for emergency links to the media are in the low-band VHF range.² They are vulnerable to interference from distant stations due to atmospheric "skip." These channels are the only ones presently available. It was a matter of using those channels, or nothing. SBE believes these same public safety/public interest conditions exist in many parts of the country that the Commission has already identified in other proceedings by defining the term "congested."³

8. TAG/EPC is principally comprised of broadcast engineers, broadcasters, public safety officials, and emergency responders. They serve without compensation. TAG/EPC exists to offer guidance on complex technical issues to non-technical policy makers within the emergency preparedness family in Los Angeles County. Over 10 million people, roughly 5% of the population of the United States, live within the borders of Los Angeles County. The County

² There are three such channels, 37.38 MHz, 39.38 MHz, and 39.98 MHz. The first is used to relay packet data under the State of California Emergency Digital Information Services ("EDIS") protocol. The other two are low quality, narrow-band voice channels.

³ For example, MM Docket 90-500, *Definition of Congested Area in the Broadcast Auxiliary Services and the Cable Television Relay Service*. "Congested Areas" were also discussed in General Dockets 21505 and 82-334.

encompasses 88 cities, including the City of Los Angeles, and vast unincorporated areas.

**III. The Commission Must Acknowledge that a Modern
Emergency Public Information Model Exists**

9. SBE believes it has something of substance to add to the Reply Comment portion of this proceeding since it has been quite active in helping to formulate a modern model of Emergency Public Information ("EPI").⁴ It has become obvious to SBE that a modern definition of EPI must consider not only all the "players," but also all the "playing fields" and the pathos that link them. Such a model adds technology to the more traditional aspects of EPI, to help solve the complexities of the dawning Age of Information. At its most basic level, such a model acknowledges participation as both transmitters and receivers by:

- Government
- Public safety
- All mass media
- Convergent communications volunteers
- The "public" itself

10. SBE believes that the "Emergency Lane" on the Information Superhighway must have Information Age attributes coupled with modern emergency management techniques. To do this, it can:

- Provide long term support for on-going emergencies

⁴ The SBE filed extensive Comments in FO Dockets 91-171 and 91-301 regarding amending Subpart G of the Commission's Rules regarding the Emergency Broadcast System. The new Emergency Alert System (EAS), adopted November 10, 1994, will now provide the framework for a new emergency public information model.

- Provide channels for reassurance to the public
- Provide for feedback from all levels, including the public
- Integrate and use multimedia resources
- Work when roads and telephones are impaired
- Employ technology to respond to the threats it must deal with
- Be multi-purpose and multi-hazard oriented

The primary resource needed for this "Emergency Lane" to exist is the appropriate "real estate" within the electromagnetic spectrum.

**IV. The Commission Must Realize that
Auctions Build Toll Roads, Not Freeways**

11. SBE must respectfully restate and heartily agree with this obvious point brought out by several Commenters. The reality of auction-based spectrum allocation is that the auction fee is passed along to users. SBE has seen nothing in the Comments in this proceeding to suggest that altruism has become an integral part of spectrum economics.

12. SBE has coined a new term, "Spectranomics," to describe giving weight to economic forces over non-economic forces of society at-large for spectrum allocation. The practice of "Spectranomics" to date by the Commission has seen an impressive list of deep-pocketed venture capitalists contribute nearly one billion dollars to the Federal government. SBE does not believe that all spectrum auctions are bad. SBE does agree with Commenters who believe that not all spectrum should be auctioned. The key question is succinctly stated in Comments from LA County:

The outlook for local government frequency retention and acquisition is increasingly bleak as precious frequency spectrum is . . . awarded to the highest bidder. There is no logical thought to the impact on the daily and emergency operations of local government, such as Los Angeles County. The consumer also suffers as auctions are a de facto tax on the public.⁵

LA County also makes the telling point:

Auctions do not improve access to communications by government and the public, they restrict it. Therefore the frequencies addressed in this matter should be awarded to those who have interests that benefit the public welfare. . .⁶

APCO, in its Comments, states:

If the spectrum is "assigned" to the highest bidders through auctions, then it is virtually assured that the principal use of the spectrum will be for subscription-based services, since that may be the only way for the winning bidders to recoup their initial investments. Entities planning to use the spectrum for revenue-raising subscription services. . . are likely to be the highest bidders in any spectrum auction.⁷

13. SBE cannot improve upon these statements, or agree more with their conclusions. The market place forces at work in "Spectranomics" are not grounded in rocket science. They are easily observed anywhere discussions on the potential dollar values of new wireless electronic technologies take place.

⁵ See Comments of the LA County, at Page 4.

⁶ See Comments of the LA County, at Page 5.

⁷ See Comments of APCO, at Page 5.

**V. The Commission Has a Duty to Protect Us from Market
Place Forces When It Comes to Questions of Life and Limb**

14. In 47 U.S.C. §309(j) (A) the Congress told the FCC that "...the Commission may not base a finding of public interest, convenience and necessity on the expectation of Federal revenues from the use of a system of competitive bidding under this subsection."⁸ SBE wishes to state this case in a more positive way. Based on the referenced Comments, and information from liaison groups such as TAG/EPC, the existing and untampered meaning of the words, "public interest, convenience and necessity" gives a clear mandate to provide for the spectral elements of the Emergency Lane. There can be no higher and better use of the spectrum, and the burgeoning capabilities of the Information Age, than the safeguarding of life, limb, and, if SBE dares to say, property as well. While adding the protection of property to this philosophy may appear to be pandering to the darker side of "Spectranomics," SBE believes the public interest is well served when we use *all* of our resources to mitigate *all* of the elements that impact human life and spirit when disasters strike.

**VI. Broadcasters and Public Safety Should Not Be
Spectrum Competitors**

15. LA County supports the contention SBE has made in other filings before the Commission that ". . .television and radio

⁸ This quotation appeared in APCO's Comments, at Page 6, Footnote 5.

stations in the Greater Los Angeles area are extremely cooperative in general, and in specific during disasters."⁹

16. LA County states in its Comments that some feedback from the broadcast industry during many types of emergencies is, in its words, "extremely valuable."¹⁰ SBE must add that the County's new \$22 million Emergency Operations Center will house sophisticated systems whose sole purpose is to gather and evaluate information gleaned from the media. SBE is aware that this trend is on the upswing through out the country. More and more public safety and government officials and broadcasters acknowledge, at least during major emergencies, that the rules of day-to-day competition must be set aside when survival is at stake.¹¹

17. The existing spectrum allocations in congested areas for both television electronic news gathering ("ENG") and radio remote pickup ("RPU") are inadequate. Indeed, in Los Angeles County, TV broadcasters and the City of Los Angeles and the LA Sheriff are licensed on common channels in the 2.5 GHz and 13 GHz bands. This means that municipal government public safety needs may be in competition with broadcasters' needs. Since such conflicts are most likely to occur during emergencies, broadcasters' use of this shared spectrum is likely to have equal-priority traffic relaying

⁹ See Comments of the CA County, at Page 4.

¹⁰ *ibid.*

¹¹ See Comments filed by Group W and SBE re: FO Dockets 91-171 and 91-301.

critically-needed emergency information back to the station, for dissemination to a potentially frightened populace frantic for information. Recent FCC spectrum actions have placed additional pressure on this situation. Personal Communications Services (PCS) spectrum has been reallocated without a proper guard band, making at least one 18 MHz wide ENG channel less than useful in the future. Other allocations in the 2.5 GHz band will have a similar effect. The net result will be a 20% loss of channel capacity in the Los Angeles market where there is already at least a 50 to 80 percent deficit in capacity. SBE contends that a major disaster is no time to play spectrum "musical chairs" after the FCC has auctioned off a significant portion of the "game's" furniture. Broadcasters in congested markets already use real time sharing, polarity offsets, multiple receive sites, microwave filters, and high gain receiving and transmitting antennas to exist in the current environment. It is not uncommon for a broadcasters to invest \$100,000 to \$250,000 to build one ENG receive site, not counting high monthly site rental fees and maintenance.

18. Radio, often the only source of reassurance to a frightened populace in the early stages of major emergencies, is suffering from spectrum shortfall needed for field support as well. Adjacent channel interference, new FCC adjacent channel allocations, and the move to compete with the high quality of ENG feeds has brought radio to the state TV now finds itself in congested markets. Aside from a handful of stations who are able to coordinate, apply for, and use Special Temporary Authority (STA) to operate in the Part 74

Aural STL band, many stations are simply unable to accomplish high quality wireless remote broadcasts. It is not unusual for even an "all news" format station in the "top ten markets" to have to accomplish its entire hand-held, vehicle-based, and airborne communications capabilities on a single repeater pair.

19. SBE notes with some irony that the Commission, in its 1991 Notices of Proposed Rule Making on EBS, asked for comments concerning the need for support spectrum to enhance communications links between local government and the media. Not one word appeared on this issue in the Commission's Final Report and Order. Consequently, no new spectrum has been allocated to support the multiple links from government to the media mandated by the new Emergency Alert System (EAS). SBE believes that the Commission could still easily find the support in this NPRM, Comments and Reply Comments, to support a special Government/Media link allocation of reserved spectrum.¹²

**VII. The 4660-4685 MHz Segment Should Be
Allocated for Broadcast Auxiliary Use Exclusively**

20. The comments in response to the Notice contain few proposed uses of the 4660-4685 MHz band specifically. Certain comments suggest that the entire 50 MHz at issue be allocated to a specific service, but only those of the Association for Maximum Service

¹² See Report and Order and Further Notice of Proposed Rule Making pursuant to FO Dockets 91-171 and 91-301, adopted November 10, 1994, and published in the Federal Register on December 12, 1994. See especially Part 11.33(a)(1), which calls for multiple audio and data inputs to the new EAS decoders.

Television, Inc. (MSTV) and other broadcast entities¹³ focus particularly on the 4.6 GHz allocation. This allocation offers a particularly good opportunity for the Commission to provide some relief, long overdue, for expanded broadcast auxiliary (Part 74) users. SBE supports wholeheartedly the comments of the MSTV group to allocate the entire 4.6 GHz segment for broadcast auxiliary use and for advanced digital video use.

21. SBE has stated for years that the Commission has not provided adequately for support spectrum for advanced television, and it is apparent that broadcast auxiliary bands in most markets are completely saturated. The MSTV group offers a number of Commission pronouncements on the subject, which note the complete saturation of the 1990-2110 MHz band for broadcast Electronic News Gathering (ENG) in most markets. SBE, the sponsor of nationwide Part 74 voluntary frequency coordination efforts, knows better than anyone that the 2 GHz ENG band is seriously overcrowded, despite extremely efficient occupancy and sharing by eligibles in those bands. SBE coordinators can no longer continue to put 10 pounds of ENG into 5 pound sacks. The Commission must create additional mobile ENG allocations below 5 GHz, in order to support the public's expectations of real-time, on-scene video.

¹³ The other entities include Capital Cities/ABC, Inc.; CBS, Inc.; Fox, Inc. and Fox Television Stations, Inc.; NAB; NBC, Inc.; Public Broadcasting Service, Radio-Television News Directors, Inc., and Association of America's Public Television Stations. These entities will be referred to herein collectively as "the MSTV group".

22. The inauguration of ATV video will make an already critical situation worse. So will the onset of PCS operation above and below the 2 GHz ENG band, which stands to seriously disrupt at least two, and possibly all, of the ten 2 GHz ENG channels. The 4.6 GHz segment will alleviate some of this overcrowding and permit some additional mobile ENG, since the band will not be shared with any other users.

23. The Notice adequately dismisses competing proposals for use of the 4.6 GHz segment, such as MSS, which already has ample spectrum elsewhere. Nor is any additional land mobile spectrum justified in the record in this proceeding. The Commission must, in good faith, resolve the longstanding Docket 92-235 proposal for reforming land mobile spectrum use before making additional land mobile allocations.¹⁴

24. The allocation of the 4.6 GHz segment for Broadcast Auxiliary use under Part 74 will provide the greatest public benefit of any of the competing proposals for use of this spectrum, and will thus meet the direction of Congress in the Omnibus Budget Reconciliation Act. See, the Notice, at paragraph 8. SBE urges that this segment be allocated for BAS use exclusively, as per the comments of the MSTV group.

¹⁴ See, e.g. *Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Services and Modify the Policies Governing Them*, PR Docket 92-235, 7 FCC Rcd. 8105 (1992).

VIII. If You Don't Fix It, It Will Break

25. In a perfect world, SBE would expect and get additional spectrum allocations for broadcasters, as well as local government/broadcaster links, from this Proceeding. In the world we actually have, SBE can do little more than adjust its expectations. SBE is respectfully calling for, in the strongest possible way, reallocation of sufficient reserve spectrum for public safety so broadcasters will not continue to be forced into conflict and competition with government for spectrum both need. That need is to provide service to the public during declared emergencies, as well as during the daily threats we all face as a consequence of life in the '90's. SBE makes no judgment on the quality of information passed on by government, or provided by the media itself. SBE only knows that the market place of ideas will always find the truth, no matter how long it takes. SBE also wishes to remind the Commission of one other eternal truth of communications: When you can't transmit, no one receives.

26. The simple messages SBE wishes to respectfully convey to the Commission are:

- Provide Emergency Lane spectrum from this and future reserves
- Do not tamper with the soul of the Communications Act.

Respectfully submitted,

SOCIETY OF BROADCAST ENGINEERS, INC.

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CERTIFICATE OF SERVICE

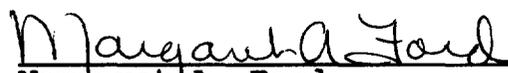
I, Margaret A. Ford, Office Manager of the law firm of Booth, Freret & Imlay, do certify that copies of the foregoing REPLY COMMENTS OF THE SOCIETY OF BROADCAST ENGINEERS, INC. were mailed this 6th day of January, 1995, via U. S. Mail, postage prepaid, first class, to the offices of the following:

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