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JAN 23 1989

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

Federal Communications Commission
Office of the Secretary

In the Matter of)
Advanced Television Systems and)
Their Impact on the Existing)
Television Broadcast Service)
)
Review of Technical and)
Operational Requirements: Part 73-E)
Television Broadcast Stations)
)
Reevaluation of the UHF Television)
Channel and Distance Separation)
Requirements of Part 73 of the)
Commission's Rules)

MM Docket No. 87-268

To: The Commission

REPLY COMMENTS OF TRIBUNE BROADCASTING COMPANY

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Tribune Broadcasting Company ("Tribune"), by its counsel, hereby submits its Reply Comments in the above-captioned proceeding. While Tribune remains committed to all of the points that it previously has advanced in this docket, Tribune seeks in this Reply to underscore its commitment to several key propositions detailed in the Joint Comments filed with the Commission on November 30, 1988,¹ and to amplify its own submissions in earlier related proceedings.²

¹That pleading was submitted by the Association of Maximum Service Telecasters, the National Association of Broadcasters, the Association of Independent Television Stations, and seventy other companies and organizations.

²See, e.g., Tribune's Reply Comments in RM-5811 (the forerunner of Docket 87-268), and in General Docket 85-172.

I. BEFORE TAKING ANY FURTHER ACTION, THE COMMISSION SHOULD ENDORSE AND/OR CODIFY A SINGLE ATV TRANSMISSION STANDARD SUITABLE FOR USE BY BROADCAST AND NON-BROADCAST MEDIA.

As Tribune and numerous other parties in this proceeding have noted, the Commission can ill-afford, whether by affirmative act or omission (or simple passivity) to permit multiple ATV transmission systems to proliferate. For at least two principal reasons, the selection of a single system is critical to the effective development of ATV, not only in this country, but in Canada and Mexico as well.

First, as recent experience with AM stereo technology has proven, the market is an inefficient mechanism for choosing between competing delivery systems. Accordingly, once an ATV transmission standard is embraced by the engineering community and the Commission's own ATV Advisory Committee, the Commission itself must move quickly either to endorse or to codify that standard. Unless and until such direction is given by the Commission, manufacturers in this country and abroad are not likely to undertake the mass production of ATV receivers prerequisite to bringing this bold new technology within the financial reach of a majority of consumers.

Moreover, even if receivers geared to different systems were produced, broadcasters and cable operators alike would be forced either to purchase costly equipment to convert programming into multiple transmission formats, or to serve only a fraction of their potential audiences. Leadership by the Commission on the transmission standard front can prevent such

potential economic barriers to the introduction and widespread distribution of advanced television from becoming marketplace realities.

Second, until consensus on the basic technical parameters of advanced television transmission emerges, no rational spectrum allocation and/or reallocation plan required to make this exciting new technology viable can or should be proposed. The problems inherent in the allocation process are extremely complex. Given the significant industry and Commission resources that will be required to solve them, it is essential that the Commission select a single transmission system with well-defined spectrum needs before undertaking the massive effort that will be required to make ATV available nationwide. Efficient allocation decisions in a multiple transmission system environment, Tribune fears, would be nightmarishly complicated if not impossible. If not properly managed, therefore, the allocation process could significantly delay the implementation of ATV in this country even after a transmission standard is selected.

In addition, although an enormous amount of transmission system design work is now underway, only a handful of systems suitable for meaningful testing by the Commission and the industry now exist. The premature consideration and adoption of ill-informed spectrum usage proposals, therefore, could severely restrict or even preclude the implementation of any one of several potentially superior transmission systems now in the

infancy of their development. As discussed below, Tribune urges the Commission to proceed with caution before taking any action in the short term which would hamper the many ongoing efforts in the scientific community to develop a true high definition television system compatible with NTSC receivers which can be delivered in no more than 6 MHz of bandwidth.

II. THE COMMISSION SHOULD PROMOTE AND ENDORSE A "SINGLE-CHANNEL" ATV TRANSMISSION SYSTEM WHICH IS FULLY COMPATIBLE WITH EXISTING RECEIVERS AND WHICH WILL NOT SIGNIFICANTLY DEGRADE NTSC TELEVISION RECEPTION.

Tribune originally submitted in this proceeding that, "the ATV system ultimately adopted should be compatible with the existing channel allocation structure and should be receivable on existing NTSC receivers without significant degradation in signal quality."³ In the fourteen months since its initial Comments were filed, however, advances in ATV system design have permitted the Company to refine its analysis. Specifically, Tribune is now optimistic that a single-channel, 6 MHz system can be developed in the near future which will render obsolete all others that would require additional bandwidth, and which will deliver true high-definition television without significant degradation in the quality of ATV signals when viewed on a standard NTSC receiver.

³See Tribune's November 18, 1987 Comments at p.4.

First, with respect to ATV spectrum requirements, Tribune has long believed that the delivery of ATV signals in 6 MHz of bandwidth would be far preferable to the use of either broader single channels or so-called "augmentation" and "simul-cast" channels to create a wider and more detailed high-definition television picture. Recent developments appear to indicate that significant progress has been made toward that goal. The Sarnoff Research Center, NHK, and The Del Rey Group all have announced their intention to perfect single-channel, 6 MHz ATV transmission systems capable of delivering superior images to ATV receivers without making the more than 160 million NTSC television receivers in the United States obsolete.⁴

Moreover, unique among the 6 MHz systems thus far proposed, Del Rey's "HD-NTSC" holds out the real promise that true high-definition television signals may be delivered in a signal compatible with existing NTSC receivers. According to Richard Iredale, founder of The Del Rey Group, all of the 6 MHz ATV systems proposed to date take advantage of progressive scanning technology, a broadened aspect ratio, and cross-luminance and cross-color filtering systems to improve transmitted images. Only HD-NTSC, however, also employs a unique "sub-sampling" technique called "TriScan" to dramatically

⁴As part of the Compatible Video Consortium formed jointly with Cox Enterprises and Westinghouse Broadcasting, Tribune is actively engaged in the development of The Del Rey Group's promising single-channel, 6 MHz system.

sharpen the reception of high-definition signals on ATV receivers. In addition, the slightly narrower 15:9 aspect ratio utilized by the Del Rey system will produce extremely narrow black bands at the top and bottom of a conventional receiver's screen as compared to substantially wider bars to be expected from other 6 MHz systems now also in development.

Accordingly, Tribune urges the Commission to forestall the selection of a single ATV transmission system to be endorsed as the industry and/or North American standard until all of these promising new 6 MHz, single-channel, NTSC-compatible systems have been tested in "hardware" form.⁵ In the event that such a system were proven technically viable, the spectrum reallocation work that the Commission would be saved, and the improvement in both ATV and NTSC receiver imaging realized, could be enormous.

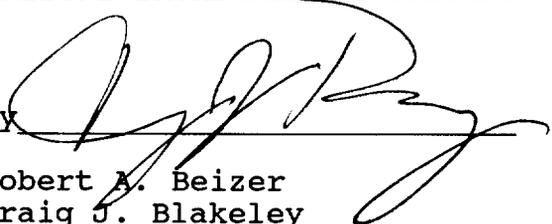
⁵Significant steps already have been taken toward that end. For example, The Del Rey Group recently announced that the Canadian Broadcasting Company ("CBC") has agreed to actively assist it in building an HD-NTSC demonstration system based upon encouraging computer simulations of the system already completed at Canada's Institut National de la Recherche Scientifique in Montreal. As has widely been reported, the CBC was among the first to apply HDTV technology. Its 14 hour miniseries, Chasing Rainbows, was shot in Canada last year entirely with HDTV equipment.

III. CONCLUSION

For the foregoing reasons, as well as those set forth in the Joint Comments in this proceeding, Tribune respectfully requests that the Commission take any and all steps necessary to facilitate the expeditious development of a single ATV transmission standard while, at the same time, allowing a reasonable opportunity for the development and testing of competing systems. Moreover, to the extent deemed possible after significant additional research, that standard should be based upon the continued use of a single 6 MHz signal which may be received with a minimum of degradation on existing NTSC television receivers.

Respectfully submitted,

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