

116. One alternative that would allow more flexibility than adopting a single mandatory transmission standard would be to protect a standard by prohibiting interference to systems using that standard, but not requiring use of that standard. An advantage of protecting certain key aspects of a standard, rather than making all aspects of a particular system mandatory, is that this action would ensure that the system could be widely broadcast and received but also would permit development and use of competitive systems that might provide superior features or lower cost. Protecting a standard, but not requiring its use, may encourage the industry to coalesce around a single system without creating inflexible requirements that prevent the development of newer, technically superior systems. For example, this approach was utilized in protecting the pilot tone of the Broadcast Television Standards Committee (BTSC) MTS system.¹³⁷ There may be features of ATV transmission that similarly can be protected and that would permit adoption of improved or different systems without the need for regulatory action to approve changes in the standard.¹³⁸

117. A variation on this alternative would be to adopt a standard for allocation and assignment purposes only, rather than mandating it as the only allowed standard. Such an approach would encourage industry participants to adopt the standard, but would retain flexibility for industry participants to modify their ATV systems in the future if alternative and superior systems are developed.

118. An additional option would be to adopt a sunset provision making adherence to the standard optional after an established period. A limited-duration standard would serve the purpose of assuring compatibility among ATV systems during the early stages of ATV implementation, but would facilitate introduction of improved technologies at a later date.

119. In light of the fact that many of the advantages of compatibility standards diminish if standards conversion costs are low, we also wish to

137 Use of Subcarrier Frequencies in the Aural Baseband of Television Transmitters for Stereo Sound, Second Report and Order in Docket No. 21323, 49 Fed. Reg. 18100 (1984).

138 To the extent that we protect certain features of a particular ATV transmission technique, our purpose would be to encourage compatibility among ATV systems and to prevent interference to such systems, but not necessarily to specify minimum quality of the transmitted or received signal or to mandate a single acceptable ATV system. Our choice concerning what features to protect and the way we define such protection may have implications for signal quality. Cf. id.

examine the feasibility of the development of an "open architecture" receiver (OAR) as suggested by Schreiber and Neuman at MIT. These parties argue that inasmuch as all ATV receivers necessarily will be capable of decoding two standards (NTSC & ATV), the cost of providing for reception of more than two standards would be quite low.¹³⁹ We recognize that concerns of cost and complexity have been raised by some commenters with regard to the open architecture receiver.¹⁴⁰ Nevertheless, if such a receiver were technically and economically practicable, the concept may allow more flexibility in the development and provision of ATV service. At this stage, however, the arguments on this issue are not well developed. In particular, we seek information on the projected cost of different receiver architectures and the projected cost of an OAR.

120. An important issue is determining the optimum time for adopting standards. It appears that in view of the rapidly changing technology in this area, adopting standards too early might result in widespread implementation of an inferior system. On the other hand, lack of accepted standards might slow broadcast ATV implementation. We request comment on the events we should use as benchmarks to determine at what point in ATV development adoption of standards would be desirable.

121. Although we intend to have a role in the ATV standards-setting process, the resources and expertise of industry will be crucial to the successful development of these standards. Therefore we encourage continued industry participation in the Advisory Committee and voluntary standards organizations such as the American National Standards Institute (ANSI), the Advanced Television Systems Committee (ATSC), and the Electronics Industry Association (EIA). We believe that these efforts will contribute materially to the information necessary to make an appropriate decision in this matter.

122. In addition to the matters discussed above, we request comment on the following:

- (1) Is it in fact desirable for us to establish a standard for ATV transmission systems? If so, would it be desirable to establish a single ATV standard or would more than one standard be preferable?

139 Letter to Chairman Dennis R. Patrick re Open Architecture Receivers, from William F. Schreiber, Director of the Advanced Television Research Program, Massachusetts Institute of Technology, dated August 2, 1988.

140 Letter to Chairman Dennis R. Patrick re Open Architecture - Advanced Television, from Gary J. Shapiro and Eb Tingley, Consumer Electronics Group of the Electronic Industries Association, dated June 30, 1988.

(2) Is our judgment correct that it is too early to adopt transmission standards? How should we determine the appropriate time to establish an ATV standard if we decide to do so? If parties agree that it is too early, we ask for comments and suggestions concerning benchmarks by which we might determine when it would be appropriate to adopt standards.

(3) What reasons are there to expect that, in the case of ATV, an industry de facto standard will become established in the absence of Commission action? What is the likelihood that a de facto standard will be the most desirable choice? Under what circumstances, if any, might a de facto standard fail to serve the public interest? What might the consequences be?

(4) If we desire to encourage the establishment of one or more ATV standards, would it be preferable to adopt them as recommendations rather than mandatory standards? What are the advantages and disadvantages of protecting key aspects of a system from interference rather than complete systems? What characteristics of an ATV system would it be appropriate to protect?

(5) What are the advantages and disadvantages of an Open Architecture Receiver approach? If there are alternative ATV systems and no individual system is clearly superior, would an Open Architecture Receiver approach be preferable to standards-setting?

(6) What are the advantages and disadvantages of limiting the duration of a mandatory standard? What would be an appropriate duration?

D. Compatibility with NTSC Receivers

1. Position of Parties

123. Nearly all the commenting parties express the belief that compatibility of ATV signals with NTSC receivers is desirable. MST, GE, and NYIT, for example, state that compatibility should be an important criterion in evaluating any ATV system.¹⁴¹ NAB and NTIA both stress that broadcasters must be allowed to continue service to current viewers.¹⁴² But MST also stresses that the options of using simulcasting and inexpensive converters should be retained. Similarly, SBCA states that compatibility is desirable but need not necessarily be a requirement.¹⁴³

141 MST Comments at 23; GE Comments at 3; NYIT Comments at 2.

142 NAB Comments at 13; NTIA Comments at 8.

143 SBCA Comments at 4.

2. Discussion

124. An ATV system that uses supplemental spectrum may achieve compatibility by transmitting an NTSC signal on one channel and detail information on supplemental spectrum. Compatibility also is possible for 6 MHz ATV systems if information is added to an NTSC signal that would not be noticeable on the screen of an NTSC receiver, such as by sending detail information in quadrature to the NTSC signal. Alternatively, with 6 MHz of supplemental spectrum NTSC service may be maintained by simulcasting an NTSC signal and an incompatible 6 MHz ATV signal.

125. Above we have discussed the issues surrounding any requirement that transmissions meet particular compatibility standards. Nevertheless, in the case of NTSC compatibility we believe that maintaining existing service is extremely important, and that the public interest would be served by avoiding any substantial dislocation of existing television broadcast service. We view with concern any situation that results in a substantial short-term reduction in service to owners of NTSC receivers. Such reduction in service might occur if stations switched from NTSC to an ATV format that was incompatible with or poorly displayed on NTSC receivers. Accordingly, while it is possible that broadcasters themselves would decide to provide NTSC compatibility, we believe it desirable to require that ATV signals either be compatible with NTSC receivers or that ATV broadcasters simulcast an NTSC signal with their ATV signal, at least for an initial transition period.

126. In this regard, we request comment on the following:

- (1) Would the broadcast industry provide NTSC compatibility without our requiring it?
- (2) If we require that an ATV signal also be receivable on an NTSC receiver, would we need to specify the quality level of the NTSC picture? If so, what are the various methods by which this could be accomplished? How long should such requirements be maintained?
- (3) If ATV-to-NTSC converters could be built and sold at low cost, would there still be a need for us to require that ATV signals be directly receivable on NTSC receivers? If so, how long should such provision be required?

E. Compatibility With Alternative Media

1. Positions of the Parties

127. With regard to compatibility with alternative video media, such as cable, satellite service, or videocassette recorders (VCRs), the commenters generally state that compatibility is desirable. NA Philips states that NTSC compatibility is preferable to using adapters in receivers or VCRs because they would be impractical, too expensive, and likely to chill product innovation. NA Philips also states that basing future ATV systems on a common standard would assist in achieving compatibility among various possible delivery systems.¹⁴⁴ MST agrees, stating that producers, delivery systems, and the public all have an interest in developing an ATV system that will not require costly conversions that could degrade program quality or impose barriers to carriage.¹⁴⁵

128. The Advisory Committee Working Parties have been considering the likelihood that the economically optimal ATV transmission method may be different for different transmission media.¹⁴⁶ In particular, Working Party 5 of the Planning Subcommittee suggests that different media are likely to choose different systems due to different tradeoffs between bandwidth and picture quality and different impacts of compatibility with NTSC for different transmission media.¹⁴⁷

129. Some commenters discuss methods of achieving compatibility. Time considers ATV system conversion to a common baseband signal to be greatly preferable to conversion to a common denominator TV system.¹⁴⁸ GI supports the specification of a common baseband component signal so that manufacturers can design cable TV converters and satellite TV receivers to supply these signals to a monitor with an appropriate input. GI argues that this capability will eliminate the costly process of transcoding ATV signals from one format to another, and that the use of an unmodulated baseband signal will minimize

144 NA Philips Comments at 21.

145 MST Comments at 27.

146 See Advisory Committee, Planning Subcommittee, Reports of Working Party 1, Working Party 4, Working Party 5, and Advisory Group 2.

147 Advisory Committee, Planning Subcommittee Working Party 5, Report at 83 (May 1988).

148 Time Comments at 36. Time uses the phrase "baseband video signal" to refer to the component video signal.

degradation of the signal caused by modulating the signal to RF and then passing it through the tuner.¹⁴⁹

130. The Advisory Committee Interim Report expressed support for component video inputs.¹⁵⁰ Working Party 1 of the Advisory Committee's Planning Subcommittee recommends that all ATV receivers be required to have some form of multisync capability and component signal inputs.¹⁵¹ Working Parties 4 and 5 urge that specifications of a Baseband Component Video signal (BCV), such as RGB with digital sound, be developed as a lowest common denominator signal for standard interconnection of various feeder and distribution systems.¹⁵² Working Party 5 of the Planning Subcommittee estimates that the cost of BCV capability will be \$20 or less per receiver in large-volume production.¹⁵³ A contribution by HBO (Kelly) to the work of Advisory Group 2 suggests that initial multistandard capability can be achieved at reduced cost by including RGB and digital sound inputs in the receiver.¹⁵⁴ The EIA has adopted as an interim voluntary connection standard the Multiport Standard (EIA IS-15) to provide a standard baseband (audio and video) interface between NTSC television receiving devices and peripheral devices.¹⁵⁵ The Multiport Standard will support Y/C, Color Difference, and RGB

149 GI Comments at 13.

150 NTSC employs composite video signals, which combine the brightness and color information in a single signal. Component video signals provide separate signals for the brightness and color information. This can be accomplished in several ways, including 1) three signals, one each for the red, green and blue color information (RGB) or 2) two signals, one for the brightness level and one for the color information (Y/C).

151 Interim Report, Executive Summary at 1.

152 Advisory Committee, Planning Subcommittee Working Party 4, Chairman's Report at 3 (April 1988); Advisory Committee, Planning Subcommittee Working Party 5, Report at 84-87 (May 1988).

153 Advisory Committee, Planning Subcommittee Working Party 5, Report at page ES-12 (May 1988). A Red/Green/Blue (RGB) type of BCV input is cited.

154 Advisory Committee, Planning Subcommittee Advisory Group 2, Document No. PS/AG2-0006 at 4 (March 1988).

155 A Status Report and the detailed specification of EIA IS-15 (Multiport Standard) has been placed in the Docket file. The standard input apparently has been implemented by only a few manufacturers. EIA considers the broader acceptance of the multiport to depend upon acceptance of the "plug-in decoder" concept by cable operators and availability from manufacturers of cable scrambling equipment, see EIA letter, supra note 140.

inputs. This indicates the efforts underway to effect voluntary standardization of connectors to support a BCV input in receivers.

131. Schreiber states that an Open Architecture Receiver (OAR) would make signal compatibility unnecessary because it could be adapted to a range of ATV transmission formats without obsolescence and without set-top converters, and could be interfaced with alternative media peripheral devices using its own computing power to facilitate the interconnection.¹⁵⁶ Such an approach could use programmable digital signal processing to receive different types of signals. However, EIA, a recognized standards-setting body under the American National Standards Institute (ANSI), and a number of other parties object to the OAR concept, arguing that it would raise production costs, increase complexity, confuse consumers, and thus delay the introduction of ATV.¹⁵⁷

2. Discussion

132. While the present array of video distribution media such as cable, VCRs, and satellite receivers use a variety of intermediate encoding standards, they all interface with a standard 525 line/59.94 field display through either a baseband or RF NTSC-like signal. Therefore there may be a commonality of interest among all industry participants to achieve interoperability among alternative distribution media. Manufacturers may have the incentive to provide for interoperability by providing for a common baseband signal or by other means. Likewise, service providers will be interested in attaining the largest market possible, a goal that may be made more achievable if a high degree of interoperability is provided.

133. Moreover, inasmuch as, at least initially, non-broadcast media will continue to require interface equipment such as cable converters and satellite receivers, it appears as if interoperability can be achieved easily and inexpensively without promulgating mandatory standards for these devices. In view of all of these factors, it is our tentative view that ATV compatibility among alternative media also may develop in an appropriate manner without government involvement. In any event, it is too early in the process for any problems to be apparent. We do not intend to retard the introduction of ATV on non-broadcast media, nor do we intend at this point to

¹⁵⁶ Schreiber Comments at 4.3.5. See also Interim Report at 9. For a nontechnical description of the OAR concept, see ATRP-T-88R, a note by William F. Schreiber, submitted to the Advisory Committee, Systems Subcommittee Systems Analysis Group, dated June 12, 1988.

¹⁵⁷ EIA Letter to Chairman Patrick, supra note 140.

require compatibility among the various media or set specific signal or equipment standards for this purpose.

134. We seek comment on the following issues:

(1) Is compatibility among media using ATV signals in the public interest? What are the advantages and disadvantages of compatibility?

(2) If compatibility is in the public interest, should it occur through voluntary standards established by industry standards groups or through Commission action? If the Commission is to be involved, should we mandate a standard or only recommend one? What are the costs and benefits of a voluntary industry standard relative to a regulatory requirement?

(3) Do relevant voluntary standards exist in addition to that of EIA IS-15? If so, what are they? Is an Open Architecture Receiver a viable alternative to a voluntary standard? What would be the benefits and the costs of such a receiver? We are interested in details of such voluntary standards as well as any information on the effectiveness of such an approach.

(4) Do we have legal authority to adopt compatibility standards for non-spectrum-using media such as videocassette recorders?

V. ALLOTMENT AND POST-ALLOTMENT ISSUES

A. Introduction

135. Our goal is to ensure that the opportunity to provide ATV service will be meaningful and will not be encumbered with unnecessary regulatory delay that would disadvantage broadcaster plans to provide ATV service and the public interest in rapid and efficient implementation. Allotment and post-allotment policies to govern the distribution and use of spectrum suitable for ATV service raise a number of issues. In this section we consider the policy and legal issues related to the manner in which this additional spectrum should be allotted or otherwise distributed. Additionally, we address issues concerning use of the spectrum during a transition period and methods of enhancing the ability of broadcasters to move into an ATV environment. We tentatively conclude that there are substantial technical, legal, and policy reasons for us to permit existing licensees to provide ATV service.

B. Eligible Applicants

136. Our objective is not to launch a new and separate video service, a context in which it ordinarily would be reasonable to entertain competing applications. Rather, our goal is to encourage beneficial technical change in the existing terrestrial broadcast service by allowing broadcasters to assimilate ATV technology. Thus our intent is to preserve and improve the existing broadcast service and the benefits that this service delivers to the public. In addition, given the risks inherent in ATV, it appears to us that rapid development of ATV broadcasting can be realized best by assigning suitable additional spectrum to existing licensees and applicants because of the considerable resources and expertise that licensees already have invested in the broadcast television system, and the possibility that additional spectrum could be used only by them.

137. At least initially it is our view that nothing in the public interest standard of the Act requires or suggests that transition to an improved broadcast service must, or should, be accompanied by major changes in the industry's ownership structure. Similarly, our initial view is that authorizing existing licensees to use additional spectrum in order to provide ATV service would not conflict with the holding of the Supreme Court that granting an application for a broadcast license that is mutually exclusive with another, without considering the merits of the other application at the same time, deprives the other of an opportunity for a hearing guaranteed by Section 309 of the Act.¹⁵⁸ The Court itself noted that the Commission could promulgate regulations limiting the class of competing applicants eligible for

158 Ashbacker Radio Corp. v. FCC, 326 U.S. 327 (1945).

comparative consideration,¹⁵⁹ and therefore its opinion has not been read to require that interested parties be afforded an opportunity for a comparative hearing in all cases. While the Commission must make a choice among eligible mutually exclusive applicants, we have discretion to determine by rule the circumstances under which applications are considered mutually exclusive.¹⁶⁰

138. In suggesting this approach, we note that we have declined to entertain competing applications in other contexts when we have found it to promote the public interest, such as when we authorize significantly expanded use of existing broadcast facilities for nonbroadcast purposes without regard to whether the use enhances or is related to main channel service already being provided,¹⁶¹ when we precluded the filing of competing applications against certain applicants proposing to change channels to provide domestic one-way paging service,¹⁶² and when we reserved one block of cellular spectrum exclusively for wireline carriers.¹⁶³ We particularly request comment on our legal authority to limit eligibility to existing broadcasters if we decide to make 6 MHz supplemental allotments that could be used for an incompatible ATV transmission service. In that case there might be legal and policy reasons to accept applications from other parties proposing to provide their own 6 MHz television service. We also ask the Advisory Committee to address this issue. We seek comment on our legal analysis and these initial conclusions.

159 Id. at 333 n.9.

160 Indeed, in United States v. Storer Broadcasting Co., 315 U.S. 192 (1956), the Supreme Court stated that the Commission may, by general rule, establish eligibility standards that obviate the need for individual hearings under Section 309(a) of the Act prior to denial of an application.

161 Shared Use of Broadcast Auxiliary Facilities With Other Broadcast and Nonbroadcast Entities, Report and Order in Docket 81-794, 93 F.C.C.2d 569 (1983); Transmission of Teletext by TV Stations, First Report and Order in Docket 81-741, 48 Fed. Reg. 27054 (1983); Use of Subsidiary Communications Authorizations, First Report and Order in Docket No. 82-536, 48 Fed. Reg. 28145 (1983).

162 MCI Airsignal International, Inc., FCC 84-397 (1984).

163 Inquiry Into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems, Report and Order in Docket No. 79-318, 86 F.C.C.2d 469 (1981).

C. Allotment Methodology

139. If additional spectrum is required for ATV and it appears feasible to use existing VHF and UHF spectrum, our preference is to distribute it in an allotment rulemaking proceeding in which supplemental spectrum would be associated with existing channels.¹⁶⁴ We recognize that several practical difficulties will arise in allotting supplemental capacity. The potential service area of ATV supplemental spectrum will depend on local circumstances, primarily the presence of NTSC stations and other ATV allotments. Some allotments may be constrained to a service radius of, hypothetically, 20 miles; others may extend to 60 miles or more. The supplemental spectrum also will occupy different positions in the VHF and UHF broadcast bands. Within a market some of the available spectrum may be close to existing NTSC allotments in frequency while other spectrum may be many channels apart. Also, within some crowded markets the amount of available supplemental spectrum may be less than that required to supplement existing NTSC allotments, particularly if the supplemental spectrum required is 6 MHz. For example, Table 2 shows that the 12 New York City stations may only receive 5 supplemental allotments under one scenario. Also, in some markets it may prove impossible to provide all existing VHF stations with VHF supplemental allotments. Therefore some VHF stations either may be matched with supplemental UHF spectrum or may not be assigned any supplemental spectrum.¹⁶⁵

140. Three allotment schemes appear possible. Under the first approach the Commission would specify the criteria for determining the suitability of spectrum for ATV. An interested party would apply these criteria to its particular circumstances, determine what spectrum is usable and available for ATV, and apply for it. This "demand" system initially would allow applicants latitude in their choices and would encourage applicants to act promptly so as to obtain the most favorable spectrum. Unfortunately, the disadvantages of

164 An "allotment" is the association of a specific frequency or channel with a particular geographic area. For example, channel 26 is allotted to Chicago. Allotments are made in rulemaking proceedings and incorporated in our rules and regulations, see 47 C.F.R. § 73.606 (1987). By contrast, an "assignment" is authorization for a specific party to use a frequency or channel. Thus, in Chicago Weigel Broadcasting Co. has been assigned channel 26 for the primary purpose of broadcasting a television signal. Under our proposal, supplemental spectrum would be associated with Channel 26 in Chicago and the licensee of that channel would be authorized to utilize it. See Television Assignments, Sixth Report and Order, 41 F.C.C. 148 (1952).

165 Supplemental allotments in the border areas must be negotiated with Canada and Mexico. In the interest of an equitable sharing of spectrum it may prove necessary to complete these negotiations before ATV service is implemented in these regions. See ¶¶ 103-105, supra.

this approach are considerable. It is likely that disputes, petitions to deny, and mutually exclusive requests for the best supplemental allotments would result in hearings and be difficult and slow to resolve. A large influx of filings also would overwhelm Commission resources and lead to further delay. Because early requests would be examined and approved without consideration of the potential preclusive effect on future allotments, a "demand" process could result in a suboptimum distribution of spectrum. Finally, this approach would not lend itself to timely identification of proposed channel allotments for international negotiations.

141. A second approach would utilize the results of spectrum studies such as those discussed above to make all the allotments simultaneously. Since we are attempting to evaluate spectrum options by matching particular spectrum blocks of 3 or 6 MHz with existing NTSC allotments, it would appear relatively straightforward to allot spectrum on a one-time nationwide basis similar to the procedure followed in Docket No. 80-90.¹⁶⁶ A new Table of Allotments could be promulgated in a single rulemaking in which every existing allotment would be amended to include additional specific spectrum. This process could be completed relatively quickly and would permit broadcasters to know in advance the conditions under which they would be required to operate. However, there are drawbacks to this method. It may not reflect the preferred choices of individual broadcasters as well as the first approach discussed above, and might result in some mismatches if broadcasters modify their facilities during the allotment proceeding. Also, if all stations cannot be accommodated with additional spectrum, this approach would not provide a method to determine which stations would receive the limited amount available and which would not receive any.

142. A third approach would combine the features of the first and second approaches in a two-step process. The Commission first would optimize allotments on a national basis, trying to provide as many stations as possible with supplemental spectrum. If a particular station could only be associated with one particular supplemental allotment the Commission would amend the Table of Allotments to show that particular relationship. If any of a group of supplemental channels could be associated with any of a number of stations (such as would be expected to occur with colocated stations, for example), after the allotment rulemaking we would employ some type of selection process to make specific allotments.

143. Possible procedures for the second part of this two-step process include: (1) private agreements, (2) lotteries, or (3) hearings. All of these procedures would recognize that choices made solely by the Commission may not

¹⁶⁶ Modification of FM Broadcast Station Rules to Increase the Availability of Commercial FM Broadcast Assignments, Report and Order in Docket No. 80-90, 94 F.C.C.2d 152 (1983).

be the best because they do not take account of terrain, man-made structures, site availability, population patterns, and similar matters that vary with locality. Also, some broadcasters might prefer allotments different from those we might make, or may not be interested in offering ATV service. The two step process would help resolve any situation in which the number of stations exceeded the number of available supplemental allotments.

144. Each possible selection procedure has advantages and disadvantages. Providing for private agreements would allow parties to resolve local allotment issues without resorting to preordained criteria, would be administratively simple, and would allow affected parties the greatest amount of choice. The parties could choose from only approved spectrum supplements, each of which would meet minimum requirements for any of the stations. If a stalemate developed or agreement could not be reached within a specified time period, we would resort to some other procedure to make the final selections. We note that private agreements are used already in other services to resolve mutually exclusive applications for new facilities.¹⁶⁷ Lotteries could prove effective at making assignments, but they also could result in some technical mismatches between NTSC stations and the supplemental spectrum. Traditional hearings also are a possibility, but they likely would be lengthy and slow. We also would need to develop criteria to use in settling the issues that would be raised in a hearing. Conceivably, if we had such objective criteria to decide which station should receive which spectrum supplement, we could apply them at the initial allotment stage and avoid the need for hearings entirely. In any event, regardless of the method used to make the initial allotment, it may be desirable to allow licensees some degree of freedom to reorganize the allotment arrangement. This is discussed in the following section.

145. In addition, we may also wish to adopt a "use it or lose it" approach in conjunction with a particular allotment scheme. A licensee would be given a fixed amount of time to use a particular allotment or would have to surrender it. We seek comment on all of these approaches.

D. Post-allotment Adjustments

146. Making allotments on a nationwide basis is a standardized process that does not address local needs and conditions. Given the constraints on available spectrum capacity, it could prove beneficial to provide for some "fine tuning" of our plan so that ATV can be implemented promptly and widely to serve the most viewers. It may turn out, for example, that some broadcasters decide that they do not want or need to initiate an ATV service. Others may find that certain initial allotments either are not feasible for economic or technical reasons or do not suit a change in circumstances, such

167 See, e.g., American Radio-Telephone Service, Inc., 54 RR 2d 287 (1983).

as a transmitter move. Finally, there may be local propagation conditions which our plan does not address but which, if accounted for, could permit greater service to viewers. For these reasons, and for those unforeseeable problems that are sure to arise, we intend to consider whether procedures should be instituted to permit broadcasters to modify and adjust ATV allotments to suit local conditions.

147. In devising such procedures, we first must decide on the nature and extent of local adjustments that might be desirable. These might encompass swaps of ATV spectrum to the extent allowed by law or adjustments of ATV service areas as mutually agreed upon by co-channel and adjacent channel parties. These procedures might even go so far as to allow reallocation of existing conventional NTSC channels so as to permit a better choice of ATV channels. The concept of licensee-initiated adjustments was raised in the NOI.¹⁶⁸ In response, a variety of legal concerns were raised, especially as to whether these ideas were consistent with Section 307(b) of the Act. We now seek comment on a more limited set of proposals.

148. In this regard we ask the following questions:

(1) Should any local adjustments be allowed? Should limitations be applied? For example, should such agreements be limited to only supplemental capacity?

(2) In particular, we seek guidance for the situation in which one broadcaster voluntarily reduces its ATV service area to allow another broadcaster to enlarge its ATV service area. Should there be a point beyond which an ATV service area should not be reduced, or should we even allow one broadcaster to completely surrender its ATV allotment so that other broadcasters could have greatly enlarged service areas?

(3) With respect to administrative action necessary to approve adjustments, we seek comment on procedures that we could use. Would treating applications for facility changes to effect these agreements as major modifications subject to public notice and petitions to deny provide sufficient Commission and public participation? Is an explanation or justification of a proposal necessary for the public interest to be served, or could we simply evaluate proposed changes and modifications on the basis of their technical merits and compliance with our rules? Should we consider proposals for changes if all affected parties do not concur or should we require unanimity?

168 Parties generally opposed the concept of permitting private agreements on interference as set out in the NOI at ¶¶ 112-113. See NAB Comments at 20, MST Comments at 62, Matsushita Comments at 19, and NBMC Comments at 3.

149. These concepts for licensee involvement in allotment and post-allotment activities have some precedent in established Commission practices. Within the television service today applicants propose initial allotments, propose changes in existing allotments, swap channels, and select sites, powers and antenna heights. Many issues and problems are resolved by the affected parties without Commission involvement. In this proceeding we are dealing with the necessity to phase ATV service into the existing service. Attempting to do so will create unique problems, and we urge that parties address these problems in commenting upon the various options.

E. Transitional Spectrum Use

1. Positions of the Parties

150. Also germane to this inquiry are issues related to use of any supplemental assignments. A number of parties commented on the ideas advanced in the NOI to permit non-ATV use of additional spectrum. NAB and Matsushita oppose permitting use of additional spectrum for other purposes,¹⁶⁹ stating that protecting reception against interference would not be possible under these circumstances. NAB and MST also argue that such use, if unrestricted, could compromise the ability of broadcasters to offer ATV because of long-term contractual commitments and the prohibitive cost of dislodging initial users, and that marketplace principles may not protect the public interest in free television service when pitted against different market demand for non-broadcast services. MST also argues that Sections 307(b) and 309 of the Act do not permit authorization of other uses, and that such authorization would result in the Commission having to compare applications involving fundamentally different uses.¹⁷⁰ NAB essentially concurs with MST's comments, emphasizing the uncertainties that would exist in the context of the comparative renewal process.¹⁷¹ At the least, according to NAB, the proposal is premature. Similarly, MST argues that any permitted nonconforming uses at most should be temporary and transitional.¹⁷²

151. However, some parties favor permitting non-conforming uses. RTT states that licensees should determine whether substantial spectrum is used for broadcast or other purposes and should be free to implement new services, subject to notifying the Commission, and possibly to demonstrating that interference will not exceed that which would be caused by ATV. RTT

169 NAB Comments at 20 and Matsushita Comments at 18.

170 MST Comments at 61-65.

171 NAB Comments at 20-22.

172 MST Comments at 57.

states that there will be no impairment of future broadcaster flexibility to commence using the spectrum for ATV since provision of auxiliary service would be discretionary with the broadcaster and subject to its control.¹⁷³ Also, NPR states that this idea could facilitate enhancement of audio broadcasting,¹⁷⁴ and NBMC similarly states that use of the additional spectrum for other purposes should be facilitated, suggesting that audio channels could be leased to minorities as a means to promote minority ownership.¹⁷⁵

2. Discussion

152. The implementation of ATV nationwide will be complex and expensive. We expect that existing licensees will not all proceed at the same pace. We are concerned that some spectrum may lay idle while the demand for ATV develops. Therefore we are considering allowing supplemental spectrum to be used for non-ATV purposes for some interim period. This opportunity would be left to the discretion of each licensee. Also, we would (1) limit non-ATV uses to a defined transitional period, and (2) authorize only secondary status for ancillary uses. These limitations should protect availability of the spectrum for ATV purposes while providing useful alternatives to broadcasters. They would protect against the type of recovery problems MST refers to in their comments discussed above, and also would prevent the type of interference referred to by NAB and Matsushita.

153. Moreover, we would continue to execute the full array of our responsibilities under Section 303 of the Act.¹⁷⁶ Broadcasters desiring to use ATV augmentation spectrum for other purposes would be required to notify us of supplemental uses and to obtain authorization. These uses would not be permitted to interfere with either NTSC or ATV broadcast service. As in the case of broadcasters that provide ancillary services on their subcarriers and vertical blanking interval, pursuant to Section 309 of the Act we would continue to focus on the primary broadcast use when making public interest judgments to grant or renew licenses and continue to apply the traditional broadcast criteria pursuant to Section 309 and associated law.¹⁷⁷ Moreover, it appears to us that these concepts might further the

173 RTT Comments at 10.

174 NPR Comments at 7.

175 NBMC Comments at 4.

176 See 47 U.S.C. §303(a), (b), (c) (1982).

177 The concept of authorizing ancillary uses of spectrum has been applied in other broadcast service concepts. For example, television licensees may utilize the vertical blanking interval to distribute textual communications

Act's mandate that we encourage the provision of new technologies and services to the public¹⁷⁸ and encourage the larger and more effective use of radio in the public interest.¹⁷⁹ We request comment on this concept as outlined above. We also request comment on our authority to allow ATV allotments to be used for other purposes.

unrelated to their main programming, see Transmission of Teletext by TV Stations, supra note 161; FM broadcasters may utilize their subcarrier frequencies to provide broadcast or nonbroadcast services such as private paging and dispatch services, data transmission, and facsimile transmission, see Use of Subsidiary Communications Authorizations, id.; television broadcast auxiliary facilities may be used for both broadcast and nonbroadcast purposes, see Shared Use of Broadcast Auxiliary Facilities With Other Broadcast and Nonbroadcast Entities, id.; and ITFS licensees may use their assignments for non-instructional purposes, Establishment of Multi-Channel Systems, Report and Order in Docket No. 80-112, 94 F.C.C.2d 1203 (1983). Similarly, in the new Direct Broadcast Satellite (DBS) service we have accorded prospective DBS licensees considerable technical and operational flexibility because, like ATV technology, DBS technology is relatively new and novel, the costs for licensees to develop and establish such service are significant, and we wish to provide an incentive for the service to develop, see Petition for Declaratory Ruling Regarding Permissible Uses of the Direct Broadcast Satellite Service, Memorandum Opinion and Order, 1 FCC Rcd 977 (1986) (DBS Declaratory Ruling).

178 47 U.S.C. §157 (Supp. 1987).

179 47 U.S.C. §303(g) (1982).

VI. CONCLUSION

154. With this Further Notice we make a number of tentative findings and conclusions and discuss a number of proposals that begin the process of narrowing the issues related to providing for the introduction of terrestrial broadcast ATV service. First, we find that this new and innovative service can be brought to the public best and most rapidly by utilizing the existing television broadcast allocations. Based on the work of the Advisory Committee and OET, it appears that capacity might be found within the existing bands for this purpose, provided certain technical conditions are satisfied. We believe that consideration of additional spectrum outside the existing allocations would not lead to as rapid implementation of ATV service because no suitable spectrum has been identified that is not already being used for other purposes; differences in propagation characteristics between the existing allocations and other spectrum bands limit their attractiveness for ATV broadcast purposes; and even if suitable candidate spectrum were identified, proceedings involving its reallocation likely would be lengthy and result in further delay of ATV broadcasting service to the public.

155. We also have tentatively concluded that service must be continued to the public's existing NTSC receivers, at least during the transition period to ATV. Although we have not reached a determination as to the precise bandwidth that should be made available for ATV, we expect to develop a number of different allotment plans and assignment options and present them for public comment as expeditiously as possible. Resolution of these issues will enable us to relax the freeze on television assignments and allotments; to consider non-broadcast uses of the broadcast spectrum; and to provide some guidance to system designers in developing ATV technology that fits within the existing spectrum constraints. We find it in the public interest not to delay or restrict the introduction of ATV in other services or on non-broadcast media, but we are sensitive to the benefits of compatibility between equipment associated with the various video delivery methods if different methods are used.

156. We seek additional information on ATV systems being designed for terrestrial broadcast ATV service, including their bandwidth requirements and their technical characteristics relative to operating within the interference characteristics suggested by the spectrum studies to be necessary for service to be provided by all or most existing broadcasters within the present allocations. We also seek comment on ATV standards and whether it would be desirable to require compatibility between ATV broadcast transmissions and other ATV distribution media. We note that our intention is to conclude our assessment of various spectrum options expeditiously, and if we decide to implement one of the supplemental spectrum options, to propose plans for that purpose. Toward that end, we have requested comment on various allotment and assignment scenarios, as well as on what adjustments we could authorize to optimize coverage areas.

VII. ADMINISTRATIVE MATTERS

A. Paperwork Reduction Act Statement

157. The proposal contained herein has been analyzed with respect to the Paperwork Reduction Act of 1980, and found to impose no new or modified information collection requirement on the public. Implementation of any new or modified requirement will be subject to approval by the Office of Management and Budget as prescribed by the Act.

B. Ex Parte Considerations

158. For purposes of this non-restricted notice and comment rule making proceeding, members of the public are advised that ex parte presentations are permitted except during the Sunshine Agenda period. See generally 47 C.F.R. § 1.1206(a). The Sunshine Agenda period is the period of time which commences with the release of a public notice that a matter has been placed on the Sunshine Agenda and terminates when the Commission (1) releases the text of a decision or order in the matter; (2) issues a public notice stating that the matter has been deleted from the Sunshine Agenda; or (3) ~~issues~~ issues a public notice stating that the matter has been returned to the staff for further consideration, whichever occurs first, 47 C.F.R. § 1.1202(f). During the Sunshine Agenda period, no presentations, ex parte or otherwise, are permitted unless specifically requested by Commission or staff for the clarification or adduction of evidence or the resolution of ~~issues~~ issues in the proceeding, 47 C.F.R. § 1.1203.

159. In general, an ex parte presentation is any presentation directed to the merits or outcome of the proceeding made to decision-making personnel which (1) if written, is not served on the parties to the proceeding, or (2), if oral, is made without advance notice to the parties to the proceeding and without opportunity for them to be present, 47 CFR § 1.1202(b). Any person who submits a written ex parte presentation must provide on the same day it is submitted a copy of same to the Commission's Secretary for inclusion in the public record. Any person who makes an oral ex parte presentation that presents data or arguments not already reflected in that person's previously-filed written comments, memoranda, or filings in the proceeding must provide on the day of the oral presentation a written memorandum to the Secretary (with a copy to the Commissioner or staff member involved) which summarizes the data and arguments. Each ex parte presentation described above must state on its face that the Secretary has been served, and also must state by docket number the proceeding to which it relates, 47 C.F.R. § 1.1206.

C. Comment Information

160. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. § 1.415, 1.419, interested parties may file comments on or before **October 31, 1988**, and reply comments on or before **December 1, 1988**. All relevant and timely comments will be considered

by the Commission before final action is taken in this proceeding. To file formally in this proceeding, parties must file an original and five copies of all comments, reply comments, and supporting comments. If parties want each Commissioner to receive a personal copy of their comments, an original plus nine copies must be filed. Comments and reply comments should be sent to the Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the Dockets Reference Room (Room 239) of the Federal Communications Commission, 1919 M Street, N.W., Washington, D.C.

D. Ordering Clauses

161. Accordingly, IT IS ORDERED that pursuant to Sections 151, 154(i),(j), 301, 303(g),(r),(s), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i),(j), 301, 303(g),(r),(s), and 403, this Tentative Decision and Further Notice of Inquiry IS ADOPTED.

162. IT IS FURTHER ORDERED, that pursuant to Sections 1.415(d) and 1.430, of our Rules, 47 C.F.R. §§ 1.415, 1.430, the motions of the Land Mobile Communications Council, Mississippi Authority for Educational Television, and Association of Maximum Service Telecasters to file supplemental information ARE GRANTED.

163. IT IS FURTHER ORDERED, that the Joint Request for Setting Additional Comment Dates filed by the Association of Maximum Service Telecasters, National Association of Broadcasters, and National Cable Television Association is DENIED.

E. Additional Information

164. For additional information regarding this proceeding, contact David R. Siddall, Mass Media Bureau, (202) 632-7792.

FEDERAL COMMUNICATIONS COMMISSION

H. Walker Feaster III

H. Walker Feaster, III
Acting Secretary

gls

APPENDIX A

Parties Filing Initial Comments

1. A-Vision, Inc. (A-Vision)
2. American Family Broadcast Group, Inc. (American Family)
3. Association of Independent Televisions Stations, Inc. (INTS)
4. Association of Maximum Service Telecasters (MST)
5. Black Television Workshop of Los Angeles (BTW)
6. Blonder Tongue Laboratories (Blonder Tongue)
7. Bonneville International Corp. (BI)
8. Broadcasting Technology Association, Japan (BTA)
9. Bundy, Jr., Walt W. (Bundy)
10. Capital Cities/ABC, Inc. (Cap. Cities/ABC)
11. CBS, Inc. (CBS)
12. Center for Advanced Television Studies
13. Chronicle Broadcasting Co. (Chronicle)
14. Corporation for Public Broadcasting, National Association of Public Television Stations, and Public Broadcasting Service (Public Broadcasters)
15. Cosmopolitan Broadcasting Corporation (Cosmopolitan)
16. Cosmos Broadcasting Corp. and M&C Communications, Inc. (Cosmos)
17. Cox Enterprises, Inc. (Cox)
18. David Sarnoff Research Center, Inc. (Sarnoff)
19. Del Rey Group (Del Rey)
20. Digideck, Inc. (Digideck)
21. Dolby Laboratories (Dolby)
22. Electronic Industries Association, Consumer Electronics Group (EIA-CEG)
23. Electronic Industries Association, Satellite Communications Section (EIA-SCS)
24. Faroudja Laboratories (Faroudja)
25. Fisher Broadcasting, Inc. (Fisher)
26. General Electric Consumer Electronics Business (GE)
27. General Instrument Corporation (GI)
28. George N. Gillett, Jr. (Gillett)
29. Great American Broadcasting Co., McGraw-Hill Broadcasting Co., Inc. and The New York Times Company (Times Broadcasting)
30. Hearst Corporation (Hearst)
31. Hitachi, Ltd., Central Research Laboratory (Hitachi)
32. Hughes Communications Galaxy, Inc. (Hughes)
33. Japan Broadcasting Corporation (NHK)
34. Japan Satellite Broadcasting (Japan Satellite)
35. King Broadcasting Company and Nationwide Communications, Inc. (King)
36. Land Mobile Communications Council, Drafting Committee (LMCC)
37. Matsushita Electric Corporation of America (Matsushita)
38. Meredith Corporation (Meredith)

39. Metrovision, Inc., Newchannels Corporation and Sammons Communications, Inc. (Metrovision)

40. Motion Picture Association of America, Inc. (MPAA)
41. National Association of Broadcasters (NAB)
42. National Black Media Coalition and the NAACP (NBMC)
43. National Broadcasting Company, Inc. (NBC)
44. National Cable Television Association, Inc. (NCTA)
45. National Captioning Institute, Inc. (NCI)
46. National Public Radio (NPR)
47. National Telecommunications and Information Administration (NTIA)
48. Neuman, W. Russell (Neuman)
49. New York Institute of Technology (NYIT)
50. Nippon Television Network Corporation, Engineering & Technical Operations (Nippon)
51. North American Philips Corporation (NA Philips)
52. Outlet Broadcasting, Inc. and Atlin Communications, Inc. (Outlet)
53. Post-Newsweek Stations, Inc. (Post-Newsweek)
54. Pulitzer Broadcasting Company (Pulitzer)
55. Radio New Jersey (Radio New Jersey)
56. Radio Telecom and Technology (RTT)
57. Radio-Television News Directors Association (RTNDA)
58. Rogers Cablesystems of America, Inc. (Rogers)
59. Satellite Broadcasting and Communications Association of America (SBCA)
60. Schreiber, William F. (Schreiber)
61. Scientific Atlanta (Scientific Atlanta)
62. Scripps Howard Broadcasting Company (Scripps Howard)
63. Time, Inc. (Time)
64. Times Mirror Broadcasting (Times Mirror)
65. Toshiba America, Inc. (Toshiba)
66. Tribune Broadcasting Company (Tribune)
67. United States Advanced Television Systems Committee (ATSC)
68. Viacom International, Inc. (Viacom)
69. Walt W. Bundy, Jr. (Bundy)
70. Zenith Electronics Corporation (Zenith)

Parties Filing Reply Comments

1. Association of Maximum Service Telecasters (MST)
2. Association of Maximum Service Telecasters, National Association of Broadcasters and the National Cable Television Association (petitioners)
3. Association of American Railroads (AAR)
4. Broadcasting Technology Association, Japan (BTA)
5. CBS, Inc. (CBS)
6. Corporation for Public Broadcasting (Public Broadcasters)
7. Cox Enterprises (Cox)
8. David Sarnoff Research Center, Inc. (Sarnoff)
9. Del Rey Group (Del Rey)
10. Hitachi, Ltd., Central Research Laboratory (Hitachi)
11. Japan Broadcasting Corporation (NHK)
12. Land Mobile Communications Council, Drafting Committee (LMCC)
13. National Association of Broadcasters (NAB)