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Federal Communications Commission
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

ORIGINAL
FILE

In the Matter of
Advanced Television Systems
and Their Impact upon the
Existing Television Broadcast
Service

MM Docket No. 87-268

COMMENTS OF THE CONSUMER ELECTRONICS GROUP
OF THE ELECTRONIC INDUSTRIES ASSOCIATION

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SUMMARY OF EIA/CEG COMMENTS

The Consumer Electronics Group of the Electronic Industries Association ("EIA/CEG") applauds the Commission for continuing its efforts to develop policies for the introduction of advanced television ("ATV"). The Notice represents another significant step forward toward the objective of choosing and deploying an ATV system that harnesses advanced technologies for consumer entertainment.

EIA/CEG reads the Notice as presenting essentially two questions: (1) How can ATV be given a successful start? and (2) How shall the elimination of NTSC broadcasting be handled? These are both challenging questions, but EIA/CEG believes that the most immediate concern is the former.

The more important aspect of the transition, in EIA/CEG's judgment, is the prompt introduction of ATV. Within reason, everything that can be done should be done to accelerate the availability of ATV to American consumers. Based on prior experience, EIA/CEG firmly believes that the acceptance of ATV by the public will largely be determined by the quantity of appealing ATV programming that is available to consumers. To ensure that the necessary programming is available, the Commission must enable broadcasters to transmit ATV programming as soon as is feasible and to create incentives for them to provide large quantities of ATV programming as soon as possible.

EIA/CEG endorses the Commission's proposal to "limit[] the pool of initial ATV applicants to existing broadcasters." EIA/CEG also supports the Commission's proposal to require that broadcasters be given a limited time to apply for construction permits after an ATV allotment table is adopted. The implementation process must be kept on track and moving forward. The "use it or lose it" approach is well-suited to that objective.

The Notice sets forth alternative means of determining which ATV channels should be assigned to particular broadcasters. EIA/CEG's strong preference is for whichever approach will be most expeditious, which probably means assigning channels within a community on a "first-come, first-served basis during an initial filing 'window,'" after first resolving allotment issues. EIA/CEG supports the Commission's proposals to allow broadcasters to negotiate over channel assignments and to adopt a financial qualification showing as a condition for awarding an ATV channel. EIA/CEG endorses the Commission's proposal to maintain the secondary status of low power television and translator stations.

Conversion of the broadcast system to ATV will require the development of considerable public interest to create demand for ATV receivers. It is the quantity of ATV programming (assuming, of course, adequate levels of quality and variety) that will be the prime driver of consumer

interest in ATV. Thus, particularly during the early stages of the transition, broadcasters should not be too strictly constrained by requirements for simulcasting of NTSC and ATV programming.

As a general proposition, EIA/CEG believes that patents on the winning standard will have to be licensed to all interested parties at reasonable rates for manufacturing companies to serve the equipment needs of broadcasters and consumers. The proponent of the "winning" standard, however, may not hold all relevant patent rights and may not be able to commit third parties to licensing of their technologies. The Commission needs to remain alert to this potential licensing complication.

EIA/CEG believes it is imperative that ATV transmission via broadcasting be "friendly" to ATV delivered via alternative media, such as satellite and cable, and via other consumer electronics equipment such as VCRs. Consumer interest is vital to the success of ATV, and consumers' enthusiasm for ATV would inevitably be dampened by the complications of dealing with multiple, incompatible standards. It is important to try to avoid situations which require the use of converter boxes, necessitate additional wiring, and hinder the use of remote controls and other desirable features such as picture-in-picture.

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COMMENTS OF THE CONSUMER ELECTRONICS GROUP
OF THE ELECTRONIC INDUSTRIES ASSOCIATION

The Consumer Electronics Group of the Electronic Industries Association ("EIA/CEG") is pleased to have the opportunity to respond to the Commission's latest Notice of Proposed Rulemaking in the above-captioned proceeding. EIA/CEG applauds the Commission for continuing its efforts to develop policies for the introduction of advanced television ("ATV"). The Notice represents another significant step forward toward the objective of choosing and deploying an ATV system that harnesses advanced technologies for consumer entertainment.

I. INTRODUCTION AND INTEREST OF EIA/CEG

EIA/CEG and its members are actively participating in numerous facets of the ATV development process. EIA has provided substantial funding to the Advanced Television Test Center. An EIA/CEG engineering committee is working to develop an ATV interface standard. EIA's Advanced

Television Committee has convened the only industry working group that brings together companies involved in consumer electronics, fiber optics, satellites, cable, semiconductors, and telephony in order to develop consensus on ATV policy issues.

Meanwhile, individual members of EIA/CEG are developing ATV transmission systems, advanced display technologies, cable and satellite delivery equipment, ATV production equipment, compression technologies, receiver architectures, VCR recording technologies, and related components.¹ They are also participating actively in the work of the Commission's Advisory Committee on Advanced Television Service. In these and other ways, EIA/CEG and its members are committing very substantial resources to the development and implementation of ATV.

Some of EIA/CEG's members may submit their own comments directly to the Commission. EIA/CEG necessarily seeks to present a broader view, speaking for the industry as a whole rather than any particular manufacturers or vendors. Collectively, EIA/CEG's membership supplies well over 80 percent of the television receivers and related products sold in the United States.

¹/ To put it another way, the members of EIA/CEG make virtually every kind of equipment that permits a scene to be transformed from light (in a studio) to light (in a home).

Much of the Notice is focused on questions which relate primarily to broadcasters, and many of the answers will require expertise that is unique to the broadcast community. EIA/CEG's response centers on those subjects as to which electronics equipment manufacturers have relevant interest and expertise. EIA/CEG believes that the perspective reflected in these comments will assist the Commission in its deliberations.

II. DISCUSSION

The Notice wisely recognizes the importance of planning now for the conversion from today's NTSC environment to the ATV environment of tomorrow. This is one of the biggest challenges presented by ATV, and it is vitally important to broadcasters, other media companies, manufacturers of receivers and other electronics equipment, and to consumers. ATV will succeed only if the transition issues are properly managed.

EIA/CEG reads the Notice as presenting essentially two questions: (1) How can ATV be given a successful start? and (2) How shall the elimination of NTSC broadcasting be handled? These are both challenging questions, but EIA/CEG believes that the most immediate concern is the introduction of ATV.

The more important aspect of the transition is the prompt introduction of ATV. Within reason, everything that

can be done should be done to accelerate the availability of advanced television to American consumers. This is essential from the standpoint of terrestrial broadcasters, manufacturers of production, transmission, and reception equipment, and consumers. Broadcasters must have the ability to compete with other media, and to do so they must not be delayed in their ability to deliver ATV. Manufacturers are eager to have the opportunity to market new products to the American public as soon as possible. Consumers will benefit from the improved technical quality of ATV signals and associated reception and display equipment. All require an expeditious and orderly transition which avoids the confusion that would be caused by multiple incompatible standards and which preserves the many benefits that are associated with this country's system of free, over-the-air broadcasting.

Based on prior experience, EIA/CEG firmly believes that the acceptance of ATV by the public will largely be determined by the quantity of appealing ATV programming that is available to consumers. The lesson is clear from experience with the introduction of color television. Although broadcasting of color television began in 1954, it took ten years or so before the percentage of U.S. homes with color television sets reached one percent. Mass demand for color TV sets fully matured only after a high percentage

of the broadcast program schedule was in color.² This experience provides powerful evidence that the critical factor for success of a new TV transmission technology is not the availability or pricing of the requisite consumer electronics equipment but the availability of substantial quantities of programming in the new transmission format.

To ensure that the necessary programming is available, the Commission must enable broadcasters to transmit ATV programming, and create incentives for them to provide large quantities of appealing ATV programming, as soon as is practicable. To be sure, it is also important that carriage of ATV programming over cable systems must also be stimulated, since a majority of homes now receive their television programming over cable television systems.

A. Eligibility and Related Issues

EIA/CEG endorses the Commission's proposal to "limit[] the pool of initial ATV applicants to existing broadcasters." (¶ 6) The Commission is quite right in recognizing that this is "the most practical and expedient way" to expedite the availability of ATV and that it will also avoid the disruptions that would occur if this

^{2/} The number of hours of color programming increased from less than 3000 in 1964 to over 12,000 in 1968. Over the same period, the number of homes with color TV receivers skyrocketed from two million to 15 million.

revolution in technology were accompanied by a radical restructuring of the broadcast industry. (See id.)

By the same token, EIA/CEG supports the Commission's proposal to require that broadcasters be given a limited time to apply for construction permits after an ATV allotment table is adopted. (¶ 11) The proposed three year period may be adequate to allow for planning and financing, even in the smallest markets. The same logic supports the proposals to require that broadcasters actually construct their ATV transmission facilities within two years after receiving their construction permits and to allow broadcasters within a market some flexibility to negotiate their channel assignments. (See id. at ¶¶ 14, 21)

EIA/CEG, however, reserves judgment on the specific details of these proposals. There may be good reasons why the three year or two year periods are not entirely appropriate as general rules.³ For example, broadcasters will require new transmission equipment, and the availability of that equipment (as well as of consumer electronics products) will depend in part on the development and disclosure of a complete specification of the ATV system

^{3/} Even if the three year-two year approach is sound as a general proposition, there may be circumstances which would justify allowing for waivers of these deadlines (e.g., stations in smaller markets may have more difficulty in securing the capital necessary for new antennas, transmitters, and other equipment).

that is selected. A full specification would go well beyond the information likely to be set forth in Part 73 of the Commission's rules.

These reservations aside, the overall thrust of the Commission's proposals appears to be sound. The implementation process must be kept on track and moving forward. The "use it or lose it" approach is well-suited to that objective.

B. Allotment and Assignment of ATV Channels

The Notice sets forth alternative means of determining which ATV channels should be assigned to particular broadcasters. EIA/CEG's strong preference is for whichever alternative will be most expeditious, which is probably the second option (¶ 19), under which channels within a community would be assigned on a "first-come, first-served basis during an initial filing 'window,'" after first resolving allotment issues.

The option EIA/CEG prefers appears to have at least three distinct advantages over the first option (¶ 18), which would combine the allotment and assignment processes and assign ATV channels on the basis of random pairings with NTSC frequencies. First, the sequential approach would allow for allotments to be resolved before assignments were made. Second, by accommodating early expressions of interest in particular channels, this approach would

increase the likelihood that individual broadcasters would receive the channels they desire. Third, and most important, by limiting advantages to those who act when the filing "window" is open, this approach would create incentives for broadcasters to move rapidly with the introduction of ATV service.

The Notice inquires whether the Commission should "adopt a financial qualification showing as a condition for awarding an ATV channel." (§ 23) EIA/CEG believes that the Commission should adopt such a requirement, since it will help to ensure that the channels the Commission is awarding to incumbent broadcasters will be used, as intended, to promote the prompt availability of ATV to consumers. In addition, this requirement would help broadcasters to plan more intelligently for their construction and operation of ATV transmission facilities. It would also expedite the availability of ATV channels to new entrants, by speeding the opportunity for qualified non-incumbents to seek channels which existing broadcasters are unwilling or unable to use to initiate ATV service.

C. Spectrum Issues

EIA/CEG endorses the Commission's proposal to maintain the secondary status of low power television and translator stations. As the Notice correctly observes, LPTV and low power operations should "yield to new ATV operations

just as they would be required to yield to existing full-service operations." (¶ 32) This approach will help to speed the availability of ATV programming to the public and accelerate the date when the volume of ATV programming is sufficient to stimulate substantial demand for the necessary reception and display equipment.

D. Conversion to ATV

The Notice postulates that "the public interest requires that we set a firm deadline or other triggering event for broadcasters to surrender their NTSC frequencies and convert entirely to ATV." (¶ 37). The Notice suggests that the triggering event could be "achievement of a specific nationwide penetration rate (defined as a percentage of households with ATV receivers)", plus a specified interval of time thereafter (such as three years). (¶ 39) Alternatively, the Notice suggests modifying that approach to take account of "market-by-market" penetration levels. (¶ 40) A third option set forth in the Notice is "to establish a firm date by which one frequency would have to be surrendered and the conversion to ATV completed." (¶ 41)

The elimination of NTSC must be planned carefully so as not to unduly disadvantage broadcasters, manufacturers, retailers, or consumers. Premature termination of NTSC service to consumers may create great

dissatisfaction on the part of those who own NTSC receivers which are capable of continuing to provide excellent service to their owners. For this reason, and because the pace of consumer acceptance of ATV receivers cannot be predicted, it would be a grave mistake to decide now that NTSC service will be terminated on some specific date in the future.

Although the precise date for termination of NTSC cannot be definitively determined at this time, it is not too soon to discuss the general approach that should be taken in deciding when NTSC service should be terminated. EIA/CEG strongly believes that the proposed "drop dead" date should be eliminated from further consideration. It is inconceivable that the Commission could forecast all of the variables that will affect the acceptance of ATV or predict at what point it will be reasonable to cease the delivery of NTSC programming. There is no way that the Commission can anticipate the pace at which ATV programming will become available, the availability of ATV broadcast equipment, the prices of ATV receivers, consumers' willingness to purchase ATV receivers, the relationship of terrestrial broadcasting to other video delivery media, the state of the economy, and other "real-world" factors.⁴

^{4/} No one would have predicted, when color television was introduced, that more than one million black-and-white televisions would be sold annually, more than 30 years later. Yet this is precisely what is happening today.

Of the other two options, the first is clearly preferable to the second. Manufacturers must respond to a national market; they cannot reasonably be expected to tailor their receiver marketing plans to a community-by-community patchwork quilt of NTSC and ATV availability. Likewise, the broadcast networks function best on a nationwide basis; their willingness to continue to provide NTSC programming would inevitably erode over time, if their numbers of NTSC affiliates diminish under the market-by-market approach. The market-by-market approach would also increase the administrative burden on the Commission.

The only workable approach appears to be to wait until receiver penetration reaches a certain level ("X" percent) and then to terminate NTSC service a fixed period of time thereafter ("Y" years). If X is a larger number, Y can be smaller, and vice versa. X unquestionably must be a significant percentage (say, 25 to 40 percent), in order to establish that ATV is achieving success as measured by consumer acceptance. Whatever number is selected for X, Y must be substantially more than three years, since time must be allowed for retirement of NTSC TVs and VCRs -- and TV sets have been shown to be durable products with an average lifespan of 15 years.⁵ Premature termination of service to

5/ In this regard, it is noteworthy that the Chairman of one of the Advisory Committee's working parties believes it to be "optimistic" to expect that ATV receiver penetration will
(Footnote 5 continued on next page)

otherwise functional NTSC equipment would cause great consumer frustration, and the political repercussions could be quite severe.

E. Simulcasting

Conversion of the NTSC broadcast system to ATV will require the development of considerable public interest to build saturation of TV receivers. As discussed above, it is the quantity of ATV programming (assuming, of course, adequate levels of quality and variety) that will be the prime driver of consumer interest in ATV.

Accordingly, broadcasters should be given maximum encouragement and incentives to provide new and unique programming over their ATV channels. The mass audience for NTSC programming will, at least initially, be protected by its size. As ATV penetration grows, market forces may do less to protect the NTSC audience, and this in turn may require some regulatory intervention to avoid depriving those who have not yet acquired ATV receivers of access to information and entertainment. These issues can be better evaluated after the transition is underway.

F. Patents

The Notice wisely seeks to initiate a discussion of patent licensing, recognizing that this may be important to

(Footnote 5 continued from previous page)
reach 40 percent within a decade after one percent
penetration is achieved. (¶ 38 n.76)

achieving high levels of receiver penetration. (¶ 46)
Again, it may not yet be possible to reach any definitive conclusions, but a few preliminary observations can be made.

As a general proposition, EIA/CEG believes that patents on the winning standard held by the proponent and by other parties will have to be licensed to all interested parties at reasonable rates so that multiple manufacturing companies will be able to serve the equipment needs of broadcasters and consumers.⁶ Certainly receiver manufacturers already engage in some cross-licensing of their intellectual property, and the proponents of the contending systems under consideration by the Advisory Committee have all committed to engage in reasonable and nondiscriminatory licensing. There is, however, one major potential complication: the issue is not limited to the patent licensing practices of the proponent of the "winning" standard. Other organizations will likely have relevant patent rights, and the winning proponent will not be able to commit those third parties to licensing of their technologies. The Commission needs to remain alert to these potential complications. It is surely in the joint interest of consumers and manufacturers (both proponents and nonproponents alike), broadcast equipment manufacturers, and

^{6/} This is the policy followed in EIA/CEG's standards-development activities, and it is also the policy of the American National Standards Institute.

receiver manufacturers, to ensure that patent issues and costs do not hinder the growth of ATV.

G. Compatibility with Other Media

EIA/CEG believes it is imperative that ATV transmission via broadcasting be compatible with ATV delivered via alternative media, such as satellite and cable, and other consumer equipment such as VCRs. Consumers are vital to the acceptance of ATV, and consumers' enthusiasm for ATV would inevitably be dampened by the complications of dealing with multiple, incompatible standards. It is important to try to reduce situations that require the use of converter boxes, which might hinder the use of VCRs and desirable television receiver features such as picture-in-picture and necessitate additional wiring.

Other compatibility issues should also be considered. Ideally, ATV reception and display equipment will be as compatible as possible with digital compression used with alternative media such as cable and with computing and multimedia equipment. All of these considerations will affect consumer attitudes, which are the foundation for the ultimate success of ATV.

Prompt, decisive, and prudent decisions concerning terrestrial broadcast of ATV will, however, increase the likelihood that other compatibility issues will successfully be resolved. EIA/CEG is addressing a portion of this issue

through a broad-based committee, which includes representatives from the cable, telephone, and satellite industries. This committee is developing an ATV interface which will accept inputs from multiple sources to facilitate interconnection and interoperation with cable, VCRs, laser discs, etc.

III. CONCLUSION

EIA/CEG commends the Commission for the progress it has made and is continuing to make in shaping the evolution of ATV. The Notice sets forth useful ideas for managing the transition from NTSC to ATV, and EIA/CEG encourages the

Commission to move forward with those which are focused on ensuring the successful introduction of ATV.

Respectfully submitted,

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