

November 20, 1995

Before the  
Federal Communications Commission  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

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

MM Docket No. 87-268

TO: The Commission

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**BROADCASTERS' COMMENTS ON THE FOURTH  
NOTICE OF PROPOSED RULEMAKING**

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## SUMMARY

Local broadcasters across the country and the networks are gearing up to bring to the entire American public the benefits of digital television over a transitional ATV channel. They are committed to using the ATV channel for HDTV broadcasting and moving quickly to transition to an all-ATV world. Equipment manufacturers are gearing up to produce the equipment and receivers on which broadcasters and viewers will depend. The undersigned are working with the Commission to develop the best plan to assign ATV channels so that existing television service is not disrupted and the broadcast spectrum is used most efficiently.

The Fourth Notice of Proposed Rulemaking gives the Commission the chance to lay the groundwork for a rapid propulsion of television through the transition and into the digital future, so that broadcasters can relinquish their existing channels and create the world's first free, over-the-air digital television service serving an entire nation. The Notice raises many difficult questions of implementation that are difficult largely because we lack the necessary information to make clear predictions about how the market will respond to various stimuli. Once the ATV signals go on the air and this information is generated, we believe the Commission will be in a better position to fine-tune its regulatory structure. At this point, it is in the interest of the public and all industries involved to get the highest quality ATV signal to as many viewers as possible as soon as possible, while not prematurely disrupting the existing service on which viewers rely. Broadcasters believe they are uniquely able to carry out this mandate.

In support of a rapid and sensible transition, Broadcasters urge the

Commission to take the following steps:

- Offer 6 MHz transitional channels, on an initially exclusive basis, to existing broadcasters to ensure the initiation of the highest quality service via the optimum transmission system without undue delay.
- Generally require ATV station construction within six years but establish a different schedule and grant waivers to less financially capable stations (such as non-commercial stations, those that are small, in small or rural markets, or under severe financial stress), recognizing that the expense of transitioning to ATV will be enormous and broadcasters have every incentive to move from operating two stations to operating one station as quickly and feasible as possible.
- Regulate operational ATV and NTSC stations throughout the transition with a single license.
- Ensure that broadcasters have the opportunity to provide the public with the full range of ATV capabilities, including HDTV programming. To this end, require HDTV minimums to the extent necessary and upon consideration of all the relevant factors affecting the transmission of HDTV programming (many of which are not in broadcasters' control).
- During the transition, apply the existing public interest obligations to the services provided on both the NTSC and ATV channels.
- Require that broadcasters complete the transition to ATV and cease operations on the NTSC channel as soon as possible without disenfranchising NTSC viewers. Avoid setting a date certain or arbitrary, self-enforcing benchmarks in the absence of market data.
- Require that, if a licensee is required to move from its channel after the transition, the new user of the vacated channel pay for the licensee's relocation so as to minimize the unfairness for that licensee and strife over initial ATV channel assignments.
- Apply the must-carry, retransmission consent, and non-degradation rules to the broadcast programming on the ATV channel and ensure that a broadcaster's channel identity is transparent to the viewer no matter what frequency it uses or what cable channel it occupies.
- Require all ATV television sets and set-top converters to be able to receive all signals in any format within the approved digital transmission hierarchy and to be able to display them in the highest quality format which the particular set is designed to accommodate. Also implement requirements that make the broadcast

channel identity impervious to the physical location of the broadcast signal either in the cable system or over the air.

- Devise a sensible fee structure for the provision of subscription-based ancillary and supplementary services on the ATV channel that is not overly burdensome and does not skew market choices.

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**BROADCASTERS' COMMENTS ON THE  
FOURTH NOTICE OF PROPOSED RULEMAKING**

These comments on the Commission's Fourth Further Notice of Proposed Rule Making and Third Notice of Inquiry (FCC 95-315, released August 9, 1995) ("Fourth NPRM") are submitted on behalf of parties representing a wide cross-section of the country's terrestrial broadcast television stations and networks ("Broadcasters").<sup>1/</sup> Some of these parties are also filing individual comments but join here to demonstrate their unified views on the critical issues at stake in this proceeding -- how and whether free, over-the-air digital advanced television ("ATV") will be delivered to the American public.<sup>2/</sup> On many points, we reassert positions we have pressed since first commenting

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<sup>1/</sup> For ease of reference, these comments refer to signatories as "Broadcasters," as have previous filings, even though the signatories to all these filings are not identical.

<sup>2/</sup> All Broadcasters support the general thrust of these comments. The positions expressed on each issue represent a consensus, and in most cases a unanimous, view. Some of the undersigned may file individual comments to clarify their positions. APTS and PBS have participated in previous joint Broadcaster filings and continue to support the positions taken by the Broadcasters on many issues. However, a public broadcast funding proposal currently before Congress would require distinct treatment of

in this proceeding in 1987.<sup>3/</sup> On others, our comments reflect certain changed circumstances that the Fourth NPRM recognizes as well. Underlying all our comments is our commitment to conduct the public's free terrestrial television service into the digital era, as we believe broadcasters are uniquely qualified to do.

### **I. BROADCASTERS' VISION OF ATV**

As the Fourth NPRM notes, the past several years have seen stunning developments in ATV technology. The Commission's first notices in this proceeding assumed that the new technology would yield higher quality video. We now know that, in addition to this, the Grand Alliance system will increase the amount of information that can be transmitted by more than five times, make the digital transmission scalable to the demands of the program and the public, function interoperably with computers, and maximize spectrum efficiency. The Commission's work in nourishing these developments and the evolution of thinking about ATV has been remarkable. Yet, one reality that has not changed over the course of this proceeding is the reliance of free, universal broadcast service on broadcasters' successful transition to ATV.

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noncommercial stations with respect to many of the issues raised by the Commission in the Fourth NPRM. Accordingly, APTS and PBS have not joined in these comments, but endorse the Broadcasters' positions as they apply to commercial broadcasters in separately filed comments. In addition, APTS and PBS support many of the Broadcasters' positions even as they apply to noncommercial broadcasters.

<sup>3/</sup> See Joint Broadcaster Comments, MM Docket 87-268, (November 30, 1988) ("Joint Comments I"); Joint Broadcaster Comments, MM Docket No. 87-268, December 20, 1991 ("Joint Comments II"); Joint Broadcaster Comments, MM Docket No. 87-268 (July 17, 1992) ("Joint Comments III"); Joint Broadcaster Comments, MM Docket No. 87-268 (November 16, 1992) ("Joint Comments IV"); and Broadcasters' Proposed ATV Allotment/Assignment Approach, MM Docket No. 87-268 (January 13, 1995) ("Allotment/Assignment Approach").

In conducting its reevaluation of ATV, we believe it is vital that the Commission remain focused on the principal purpose underlying its original decision to award broadcasters a second 6 MHz channel: namely, to enable broadcasters to offer to the public the same free over-the-air programming service they have historically offered but with the highest possible picture resolution and sound quality. The rules the Commission promulgates to guide the transition to this technically superior service should be geared to accomplish this purpose and should be designed to stimulate the market for ATV so that the transition occurs in the fastest possible time.

Consistent with this approach, the Notice conceives of the second channel not as a separate or new program service, but instead as a higher-quality replacement channel to facilitate higher quality transmissions, with one of the two channels to be returned at the end of the transition period. While the flexibility that technology has made possible may lead to beneficial subsidiary uses, these uses will not deflect broadcasters from serving the public interest with the high-quality program services they offer today, but with tomorrow's technical quality. Technology has not changed the ATV channel's principal purpose, which is to serve as a transition channel for these purposes.

As we examine the implementation issues on which the Commission has requested comment -- HDTV minimums, simulcasting, public interest obligations and must carry -- we believe that this principal purpose must inform and guide the analysis.

**A. FREE, UNIVERSAL, UPGRADED, LOCALLY-BASED DIGITAL BROADCASTING**

Broadcasters must prepare to go digital to stay in business and continue to provide all Americans with a free, locally-based television service. This transition will be expensive and difficult. It will require substantial capital outlays, which will be

particularly burdensome for smaller and noncommercial stations, and most likely will not be offset by any additional revenue. These circumstances present broadcasters with a powerful incentive to reduce their operating expenses by moving expeditiously through the transitional operation of two channels to the operation of a single ATV channel, allowing the Commission to recapture one broadcast channel once the transition is complete.

At the same time, broadcasters must continue to provide NTSC service to finance the upgrade to digital and to avoid disenfranchising viewers who take longer to invest in new digital receiving devices. Undoubtedly, the Commission faces a difficult task of balancing the objectives of transition speed and consumer protection. Throughout this proceeding, it has shown that it is mindful that an overly-rushed transition or the assignment of channels that do not replicate existing coverage will disenfranchise viewers and harm the free, over-the-air television service of which this country is so proud. We comment on the balance that should be struck in particular instances below. In general, it is critical that the Commission craft rules in response to the market and refrain from rushing to judgment where there is still insufficient data regarding the public's demand for services, speed of equipment upgrade, and programming development, among other real-world concerns. In all, the wisest regulatory policy would be to proceed cautiously along what now is perceived to be the right course, with the understanding that the Commission cannot correctly predict the future impact of all relevant factors from market response to ATV to equipment prices and availability. The international implications of the ATV channel assignments also cannot be known now and preliminary ATV channel assignments for stations near the Canadian and Mexican borders may be

particularly vulnerable.<sup>4/</sup> The development of ATV will show what needs to be corrected along the way. Regulatory intervention should only be exercised to ensure that the entire public, no matter how it receives the signal, is exposed to all facets of ATV most quickly. Ultimately it will be the market that will determine what use is made of the ATV technology.

**B. HIGH QUALITY, PUBLIC-MINDED PROGRAMMING**

Broadcasters know that their business success rises and falls on the appeal of their news, entertainment, sports, and informational programming. Whatever horizons a flexible ATV system will open, broadcasters remain committed to their core business of broadcasting which undoubtedly will include HDTV programming. The prospect of wide format, high resolution HDTV catalyzed this proceeding and remains its most powerful engine. We believe that the marketplace is the most appropriate and efficient instrument to determine the optimum balance of HDTV and other ATV services. However, we also recognize that HDTV should be given a fair chance for public acceptance as the chief component of the next generation of free television service. Regulation in the form of minimum HDTV transmission requirements should apply if the Commission decides that such requirements are necessary to secure for HDTV that fair chance in the marketplace. As described below, any such requirements must be sensitive to the availability of HDTV programming and the desirability of experimentation.

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<sup>4/</sup> Broadcasters have long been mindful of the international implications of allotting and assigning ATV channels and have sought to work with the Commission in planning around these. See Allotment/Assignment Approach, at 33-34; Joint Comments II, at 32-33.

In general, the Commission should permit broadcasters to tailor their schedules to meet the varied needs of their communities as they have done so successfully in the past. Broadcasters and the public should have the flexibility to exploit the “genius of the engineers who have labored to produce the technical advances and system developments of the past few years”, consistent with use of the ATV channel as a replacement channel. See Fourth NPRM, at 3. Furthermore, any fee structure imposed for the provision of ancillary and supplementary services could be based either on the revenue such services garner or on the bitstream such services consume or some other mechanism, so long as care were taken not to skew the service mix, expose confidential information, or burden the Commission and industry with unmanageable or intrusive paperwork. Similarly, public interest responsibilities, while remaining robust, should not increase the government’s influence on programming content.

## **II. INITIAL LICENSING ISSUES**

Assigning ATV spectrum efficiently and productively depends on appropriate decisions with regard to a series of initial spectrum and eligibility issues. The most important of these issues involve to whom, how much, and over what period the transitional spectrum should be distributed. Shortsighted or misguided decisions in these areas may depress consumer or market interest, equipment production, or television signal quality (NTSC or ATV) and thus could permanently disable the development of ATV.

A. INITIAL ELIGIBILITY

We strongly support the Commission's continued determination to limit initial eligibility to existing broadcasters. See Fourth NPRM, at 12.<sup>5/</sup> This is the decision that best -- and perhaps alone -- ensures that experienced and responsible parties will undertake the risky and difficult roll-out of ATV service to the public.

First and foremost, technical considerations compel this restriction on initial eligibility. Unlike pristine spectrum that the Commission is assigning in other proceedings (such as that decommissioned from the federal government), the frequencies to be used for ATV will be combed from already dedicated and utilized broadcast spectrum. During the transition, ATV operators will have to contend with a host of ongoing complexities related to existing NTSC channels, including adjacent and co-channel interference, new NTSC-to-ATV and ATV-to-NTSC interference, tower siting, equipment purchases, and programming development and procurement. As we submitted to the Commission in our Allotment/Assignment Approach, pairing ATV and NTSC channels is key to addressing these issues effectively. Only such an approach can pack twice as many channels into the existing interference-limited television spectrum while encouraging ATV/NTSC tower collocation, maximizing coverage, and minimizing the premature degradation of NTSC service. See Allotment/Assignment Approach, at 8-24.

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<sup>5/</sup> We have long supported the Commission's proposed ranking of initial eligibles as follows: full-service stations and permittees with constructed facilities and program test authority, permittees without constructed facilities, and applicants. We have also supported the Commission's determination to accommodate translator stations and pair all vacant noncommercial allotments with ATV channels, provided that such allotments do not preclude ATV allotments to existing broadcasters. See Joint Comments III, at 15-16.

Such a plan is only workable if initial eligibility is limited to the licensees of the NTSC channels that are to be paired.

Second, as the Commission has recognized, existing broadcasters' know-how and experience put them in the best position to sustain the risks and invest the capital needed for a successful transition to a free, over-the-air digital broadcasting system. Indeed, existing broadcasters that are already operating in the spectrum band to be assigned are probably the only operators capable of providing the new television service without harming the old. See Fourth NPRM, at 11. Considerable sums (in the range of \$500 million), expertise and other resources have been devoted to the development over the past eight years of ATV systems and testing, through to the final testing of the Grand Alliance system this fall. Broadcasters have participated substantially in this effort because they are committed to realizing the full potential of ATV. In response to this commitment, manufacturers have begun to design equipment for the existing broadcasters and their viewers, both of which comprise clearly defined markets for the new equipment.<sup>6/</sup> This synergy creates the most favorable environment for the high-volume, low-cost production of equipment that will have to be installed in some 1600 stations and receivers that will ultimately replace America's existing 200 million NTSC television sets.

Third, existing broadcasters already demonstrate many of the characteristics that the Commission and Congress have found to serve the public interest. They represent and serve diverse sections of this country, know the needs and interests

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<sup>6/</sup> The consumer electronics community has supported the restriction of initial eligibility to existing broadcasters. See Letter of Gary Shapiro, Electronic Industries Association to Senator Larry Pressler, September 14, 1995 (urging that broadcasters be assigned ATV channels free of charge).

of their local constituencies, implement successful EEO programs, and are often involved in public service outside of their broadcast functions. Increasingly over the last decade, broadcast television has come to serve an ever more important role in contributing to an informed electorate as the amount of local news programming has exploded and live coverage of critical events has become commonplace.<sup>2/</sup> Most Americans rely on universally available and free over-the-air broadcasts as their principal source of news and public affairs programming and broadcasters in turn view their civic role as central to their business. Broadcasters' initiation of the transition to ATV ensures that catering to the public interest in diversity and community service will carry on.

The issue of initial eligibility, coupled with the allotment/assignment methodology, are among the most critically important decisions the Commission faces in this proceeding. The Commission's goals for the ATV roll-out can only be achieved by existing broadcasters, operating on paired transitional ATV channels assigned to maximize and replicate existing coverage. Only thus will the Commission be able to preserve free, universal broadcasting service, foster an expeditious and orderly transition, recover contiguous blocks of spectrum, and best serve the public interest. See Fourth NPRM, at 4.

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<sup>2/</sup> A 1991 Smithsonian Institute report noted that there had been a three-fold increase in local television news programming in major markets since 1980, that network affiliates had increased local news coverage by 10% each year in the morning and prime-time dayparts from 1986 to 1988, that the number of independent television stations with local news had increased by 25% since 1970, and that the amount of network news and public affairs programming had risen by 30%. See "The 'Public Interest' Standard Under the 1934 Communications Act: Hearings before the Subcomm. on Communications of the Senate Comm. on Commerce, Science and Transportation," 102d Cong., 1st Sess. (1991) (statement of Alfred C. Sikes, FCC).

**B. BANDWIDTH**

The Commission has requested comment on whether ATV could be broadcast on channels less than 6 MHz wide. The Commission should proceed on the same fundamental principle in this area as in others -- to ensure that the public has the opportunity to benefit from ATV's full capabilities. At the center of these capabilities is the use of the ATV channel for HDTV transmission, which requires the entire 6 MHz.<sup>8/</sup> An assignment of a slimmer channel would not only jeopardize the quality that justifies the great expense and disruption of converting to digital but would probably forever deprive the public of free, over-the-air HDTV. There is simply no less-than-6 MHz system even theoretically proposed, let alone translated into the reality of actual equipment subjected to the battery of rigorous field and lab tests that the Grand Alliance system has undergone.

The significance of the spectrum efficiencies that have already been achieved should not be underrated. The ingenuity of the Grand Alliance system will permit high quality HDTV broadcasts, carrying five times the information of NTSC broadcasts, over the same 6 MHz channels. This system has enabled the United States to forge the breakthrough in terrestrial ATV broadcasting even though American broadcasters are confined to relatively narrow 6 MHz channels as opposed to the 8 MHz channels allotted to their counterparts in Europe and Asia. Whatever the chances that the future will see even greater efficiencies, they are not remotely possible now, when an ATV standard must be set. Devising a channelling plan that overlooked today's

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<sup>8/</sup> Broadcasters will exploit the flexible capabilities of the digital channel differently, but all expect to deliver some HDTV programming requiring the entire 6 MHz.

realities in pursuit of tomorrow's fantasies would retard, if not totally disable, the provision of ATV and negate our country's great achievement.

Any ATV transition plan premised on channels of less than 6 MHz would set back by years the transition schedule and the return of the NTSC channel. The Grand Alliance transmission system, designed for 6 MHz channels, represents eight years of intensive technological development and the best efforts of the country's finest equipment manufacturers and engineers working under the Commission's guidance. A system designed for slices of the 6 MHz channel would require an entirely new design, as well as a laboratory and field testing program. In addition, a new methodology for assigning stations would have to be developed. In the meantime, this country's only free and universally available television service would be stuck with existing technology as competing services surged toward a digital future. Even assuming that a system using narrower channels could be developed, it would not have the HDTV capability that has always been the central aspiration of this process. Under that scenario, the free, over-the-air television service that reached all Americans would be substantially inferior to what is now contemplated, inferior to what the public was promised, and probably inferior to what competing pay-systems will offer. In short, a plan premised on less than 6 MHz channels would abandon state of the art technology for a less advanced, unproven model capable of only a fraction of the quality of HDTV with far less flexibility. Fast moving technological developments would likely make such a system obsolete very quickly, especially since designing and testing the system would delay its introduction for years to come.

C. APPLICATION AND CONSTRUCTION

Broadcasters support the Fourth NPRM's proposal with respect to an ATV license application and ATV station construction period. This proposal would establish a procedure whereby broadcasters would have six months from the later of the adoption of an ATV standard or allotment table<sup>9/</sup> in which to confirm that they will apply for an ATV license. After that, they would have the remainder of a three-year period in which to apply for an ATV license and an additional three years to construct an ATV station. See Fourth NPRM, at 24. This is a sensible baseline plan that would give many broadcasters sufficient time to put ATV signals on the air while ensuring that unused ATV channels are not dedicated needlessly to the few broadcasters who may not choose to participate in the initial ATV roll-out.<sup>10/</sup> We also support the proposal to automatically extend the application deadline for a licensee that has not built its ATV station after six years but for whose channel no other entity has applied. See Fourth NPRM, at 26.

The build-out timetable imposed on broadcasters, particularly smaller and noncommercial stations, should take account of market realities. The Commission has identified some of the operational difficulties more than 1600 existing stations will face in achieving ATV "pass through" and ultimately production capabilities for their facilities. Before the conversion is complete, stations will have to finance equipment

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<sup>9/</sup> Broadcasters urge again that the Commission adopt a standard and a paired table of allotments and assignments in the same decision. The performance characteristics of the system -- propagation and interference -- after all, are integrally related to allotment/assignment choices.

<sup>10/</sup> We believe the number of these broadcasters will be small, but the principle is sound and is consistent with the basic tenet that local broadcasters should be permitted to make decisions that reflect the economics in their markets.

modifications and replacements from every camera to electronic newsgathering equipment, signal distribution and switching equipment, transmitters, and antennas. Much of this overhaul will have to occur in the early years simply for signal "pass through" purposes. Stations will have to undertake this effort even though few broadcast engineers are trained in the digital environment, and few engineering or construction companies can claim expertise in building a digital broadcast system. Program production for the new compressed format will require new technologies to handle signal splicing, editing, format conversion, archiving, and retrieval.<sup>11/</sup> These capital costs of the transition are estimated to run from ten to twenty million dollars per station (and where new towers and other infrastructure are needed, substantially more). There is also reason for concern that the broadcast equipment manufacturing industry may not have the capacity to design and manufacture the quantities of equipment which will be needed to meet a rapid nationwide roll-out of ATV.

Those stations that need to collocate their NTSC and ATV transmitters to avoid interference or other problems will face stiff coordination challenges as demands double (for example, bringing the demand on New York City's World Trade Center to 20 channels) and operators maneuver to install and coordinate ATV transmitters on the same site. Licensees that are not able to collocate will have to find new tower sites, which will involve significant engineering and transaction costs (due to zoning, FAA, environmental, and negotiation issues).<sup>12/</sup> In addition, most broadcasters will have to

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<sup>11/</sup> See "Comark Gets Grant for ATV Transmitter," Broadcasting & Cable (September 25, 1995).

<sup>12/</sup> The Joint Comments II, at n.13, describe in detail the myriad logistical problems broadcasters transmitting from the World Trade Center will face in making the transition to ATV. The Commission is well aware from other contexts of the significant local

cope with the additional expense and new regulatory questions connected with increased power use. These factors, unavoidable in many or even most cases, also will cause delay.

Beyond the costs of the physical transition, broadcasters will face the daunting challenges of adjusting to an HDTV and multichannel environment. Stations also will have to replace studio sets that will not hold up under the higher resolution or wider aspect ratio of HDTV. There will be additional transaction costs associated with obtaining programming rights and cable carriage that may not be offset by additional revenue. Perhaps most importantly, broadcasters will have to struggle to hold viewer and advertiser loyalty despite what are likely to be jolting disruptions to channel number identification and branding that in many instances have taken generations to develop.

The weight of these challenges will be greatest for smaller stations, stations in smaller markets, and noncommercial stations, as the Commission has recognized. See Fourth NPRM, at 25-28. The radical variations in social and economic conditions from market to market support a market-staggered approach to ATV construction deadlines. Whereas the current six-year period may be sufficient for the larger markets and stations, it might put an unbearable strain on those stations that have serious difficulties in raising the conversion funds and whose viewers are slower to buy ATV sets. We urge a less demanding timetable for stations for which the transition will be particularly onerous, as we have in the past.

In addition, we also support a waiver policy whereby stations could petition the Commission for extra time.<sup>13/</sup> The procedure should be simple (requiring licensees to explain why they need the extra time and when they propose to complete their transition) and waivers should be granted liberally. Given the licensee's strong incentive to make the transition as quickly as possible to compete in its market and reap the cost efficiencies of single signal operation, there would be little incentive to abuse this policy, but the Commission has the authority and experience to curb abuses when they arise.

A last category of problems to be considered in this area is that of very small commercial and noncommercial stations which serve the indispensable and important function of broadcasting to large, but sparsely populated, areas of the United States, but which cannot afford to build and operate both an NTSC and ATV station to serve the same small audiences they presently serve with a single channel. By allowing these stations a grace period to convert to ATV, the Commission would ease the burdens of dual-mode operation for those stations least able to afford it and ensure that rural Americans have the opportunity to participate in the new ATV services and technologies.<sup>14/</sup>

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<sup>13/</sup> Waivers will be necessary in some instances to deal with tower loading, antenna placement, FAA, zoning and other issues that may be even more constraining and cause even greater delays in some of the larger markets.

<sup>14/</sup> Concern that the information explosion should reach all Americans, no matter where they live or how much money they have, was recently expressed in "Falling Through the Net: A Survey of the 'Have Nots' in Rural and Urban America," U.S. Department of Commerce (July 1995). This study concluded that computer and modem penetration levels are markedly lower in rural areas and among poorer urban Americans than in other areas and among those of greater means. A sensible ATV transition plan will ensure that free, over-the-air digital television will be one addition to the information superhighway that reaches all Americans.

**D. SINGLE LICENSE**

The Fourth NPRM proposes to issue a single, unified license permitting operation of both the NTSC and ATV channel throughout the transition. See Fourth NPRM, at 19. We believe this would be a sound procedure once the ATV signal is on the air.<sup>15/</sup> At a minimum, it would reduce administrative burdens for both the licensee and the Commission. It is also consistent with the paired assignment of ATV channels and this proceeding's premise that ATV is a necessary upgrade of existing broadcast service, rather than a new service.<sup>16/</sup> As stated below, we also believe that holding a licensee singly responsible for the operation of both ATV and NTSC channels will foster the public interest goals broadcasters have long pursued.

**III. USE OF THE ATV CHANNEL**

The Commission has also requested detailed comment on how broadcasters should be permitted and required to use the ATV channel. The comments below on various potential modes of digital television operations and public interest obligations are all founded on our first principle -- that broadcasters should use the transitional channel to provide the highest quality, free, over-the-air digital television service to the entire American public. Endeavors that tend to support this goal should be

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<sup>15/</sup> A construction permit should be issued for the construction of the ATV channel. Once the licensee begins to transmit ATV signals, its obligations would coalesce and its license for both channels should be unitary.

<sup>16/</sup> Our position has always been that the Commission is not precluded by Ashbacker Radio Corp. v. FCC, 326 U.S. 327 (1945), from limiting initial eligibility to incumbent broadcasters because it is not issuing licenses for a new service. See, e.g., Joint Comments I, at 7-10 and Joint Comments II, at 12-13. We are gratified that the Commission has tentatively come to the same conclusion. See Fourth NPRM, at 13.

encouraged, those that tend to frustrate this goal should be discouraged, and those that are neutral with respect to this goal should be left to the public to encourage or reject.

**A. Minimum HDTV Broadcasting**

The ATV transmission system will permit a broadcaster to organize the information transmitted over the ATV channel into a single HDTV program,<sup>17/</sup> multiple standard definition programs (“SDTV”), or a combination of SDTV broadcasts and other services. See Fourth NPRM, at 8. Broadcasters want the public to have an opportunity to view HDTV as the centerpiece of the next generation of free, over-the-air television and recognize the contribution that an explicit commitment to HDTV broadcasting may make toward this end. Indeed, many broadcast organizations have voluntarily made such a commitment, appreciating the benefits to the industry and the public of providing the highest quality picture and sound, particularly during periods of the broadcast day that have substantial viewership.<sup>18/</sup> The implementation of this

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<sup>17/</sup> The Grand Alliance system is capable of transmitting 19.40 million bits per second. HDTV draws on six to 18 million of the 19.40 million total, depending on the amount of action in the HDTV program, which of course will change frame by frame. To pack this volume of data into a 6 MHz channel requires significant compression of the video and audio streams. The Grand Alliance system compresses the data rate by a factor of 42 through a video encoder that reduces temporal and spacial redundancy, frame to frame. In other words, the system only transmits the information that changes from one frame to another, while carrying over from memory those portions of the data stream that are unchanged. Motion vectors comparing one frame to the next predict new pictures on the basis of pictures stored in memory.

Broadcasts of less action-intensive material may require less bandwidth, leaving room for the transmission of additional information even during HDTV broadcasts. Such additional capacity could be used to transmit program-related supplementary materials, special services for the disabled, advertisements, or public service announcements, among other applications.

<sup>18/</sup> The commitment to HDTV is reflected by a resolution recently adopted by the Board of Directors of the Association For Maximum Service Television, Inc., representing about 300 local stations:

commitment should provide a nationwide distribution mechanism for free broadcast HDTV. In so doing, it should also give program producers and equipment manufacturers the necessary incentives to support HDTV and consumers the necessary exposure to consider the benefits of HDTV.

We are aware that the Commission may deem such a voluntary commitment insufficient and decide to impose an HDTV transmission minimum between the hours of 6 a.m. and midnight. If so, the Commission should bear in mind a number of important considerations with respect to the character and commencement of such a minimum. Most generally, any such minimum should permit broadcasters to respond to market demands and to innovate with this brand new technology. It should not lock all broadcasters into uniform programming in certain dayparts. Rather, stations should continue to serve as local laboratories by experimenting with ATV's capabilities. Some broadcasters may wish to make flexible use of the channel to offer a multicast service for part of the day. And the Commission has indicated its support for flexible use of the ATV channel to allow broadcasters "to serve the public with new and innovative services." See Fourth NPRM, at 10.

Arriving at an appropriate minimum amount, if a mandated minimum is in fact necessary, requires an assessment of the availability of HDTV programming, the time it will take for broadcasters to achieve HDTV program origination capability, initial

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The MSTV Board reaffirms its goal and commitment to broadcast high definition television ...[including] a reasonable minimum amount of [HDTV], as determined by FCC rules. The goal of public policy and of the local television station community should be to transition as rapidly as feasible and practical, consistent with the unique nature of each market and the needs of our communities, our nation's free and universal television broadcast system to the digital era ....

consumer interest and reception capabilities, the ease with which independent stations are able to obtain HDTV programs (including the costs of such programs), and other factors related to the transition to ATV equipment. Virtually the only existing material originally produced in HDTV quality is 35 mm film. The HDTV program inventory will grow as program suppliers respond to the new demand and as stations and networks convert their studio and remote equipment to HDTV production. A minimum HDTV commitment, whether required or voluntary, could be a factor in stimulating demand. However, if required, the minimum should not be set so high in the early years as to outstrip the program supply or put undue financial pressure on stations whose first priority is to achieve HDTV "pass through" capacity to meet the FCC's construction deadline.

As a practical matter, we believe the Commission will not be able to evaluate these factors on an informed basis without the benefit of some real-world experience. If it decides that required minimums are necessary, the Commission should take a measured, incremental approach that would permit adjustments for any mistakes in the initial calculus (based solely on predictions) as marketplace conditions change. Accordingly, we think that an annual number of hours averaging no more than five hours per week would be appropriate, possibly subject to change once the market begins to respond.<sup>19/</sup> A benchmark cast as an annual, rather than a weekly, average will allow flexibility without sacrificing the total amount of HDTV programming and will have the added benefit of encouraging the HDTV broadcast of popular programs (such as

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<sup>19/</sup> The Commission has already built reality checks into the ATV roll-out process, recognizing that they are necessary to attune regulation to the equipment/programming/advertising/viewer marketplaces.

the Olympics or seasonal sports) that are likely to expose the most viewers to the technology.

Such a requirement should take effect as soon as possible and practicable, provided that HDTV programming is sufficiently plentiful and affordable so that compliance with a required minimum would be realistic. Like so many steps in the transition, the availability and pricing of such product and the cooperation of program rights holders are not entirely within broadcasters' control. Cooperation from the programming community will be essential in order for the requirement to be workable.

**B. SIMULCASTING**

The Commission's first proposals to require that broadcasters simulcast their ATV programming on the NTSC channel meant to achieve two aims: first, to prevent consumers from prematurely losing the value of their NTSC television receivers or quality NTSC service (assuming broadcasters would enrich the ATV channel at the expense of the NTSC channel) and, second, to prevent broadcasters from developing separate programming services that would delay the transition (assuming broadcasters and the public would become accustomed to different programming on the two channels). See Fourth NPRM, at 17.<sup>20/</sup>

The Fourth NPRM rightfully recognizes that broadcasters are unlikely to move their best programming from the NTSC channel, stranding NTSC-only viewers. The simulcast of NTSC programming on the ATV channel will spare NTSC-only

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<sup>20/</sup> See also, Second Report and Order/Further Notice of Proposed Rule Making, 7 FCC Rcd. 3340, 3355, 3357 (1992) ("Second Report and Order") and Memorandum Opinion and Order/Third Report and Order/Third Further Notice of Proposed Rule Making, MM Docket No. 87-268, 7 FCC Rcd. 6924, 6970-71 (1992) ("Third Report and Order").