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

ORIGINAL FILE

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

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NOV 30 1988
Federal Communications Commission
Office of the Secretary

MM Docket No. 87-268

JOINT COMMENTS

The Association of Maximum Service Telecasters, the National Association of Broadcasters, the Association of Independent Television Stations

And Seventy Other Broadcast Organizations and Companies

November 30, 1988

SUMMARY

These comments are submitted on behalf of organizations and broadcasters representing a substantial majority of broadcast licensees, who join together to demonstrate their strong and unified views on certain basic issues raised by the Tentative Decision and Further Notice of Inquiry.

We strongly support the Commission's conclusion that providing for terrestrial broadcast use of ATV techniques would be in the public interest. Moreover, the Commission should provide sufficient supplemental spectrum to existing licensees to enable them to provide the public with free, over-the-air ATV service competitive in quality with other delivery media while continuing to serve NTSC viewers. We believe the need to provide rapid and efficient ATV service to the public without a disruptive transition period provides ample reason to conclude that limiting eligibility for this supplemental spectrum to existing licensees is in the public interest.

We also believe the Commission should act in a timely manner to adopt a single standard or family of standards for terrestrial broadcast ATV transmission. By declaring that it intends to take this step, the Commission will greatly enhance the prospects for developing an industry-wide consensus on which such a determination can be grounded.

Similarly, the Commission should declare now that it will closely monitor the development of non-broadcast ATV and take whatever steps appear to be necessary to ensure that

there is a sufficient degree of intermedia interoperability to protect the ability of the local broadcast system to enter the ATV market.

While we appreciate the Commission's support, we urge the Commission not to take any premature actions in its effort to implement broadcast ATV that could impede development of this emerging technology or threaten the long-term viability of the local broadcast system. Specifically, allotment plans should not be adopted until the Commission has significantly more information about the quality, spectrum requirements, cost, and other specifications of individual transmission systems. Furthermore, the freeze on new assignments and further land mobile sharing of the VHF and UHF bands should be continued. Finally, the Commission should not place arbitrary constraints on the supplemental spectrum available for broadcast ATV by ruling out the use of all bands other than the current VHF and UHF broadcast bands.

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JOINT COMMENTS

These comments on the Commission's Tentative Decisions and Further Notice of Inquiry (FCC 88-288 released September 1, 1988) ("Tentative Decision") are submitted on behalf of parties representing a wide cross-section of the country's terrestrial broadcast television stations. Many of these parties are also filing individual comments in this wide-ranging inquiry; they join together here to demonstrate their strong and unified views on certain basic issues raised in the Tentative Decision.

I. Implementation of ATV By Terrestrial Broadcasters Is In The Public Interest.

We strongly support the Commission's tentative conclusion that providing for terrestrial broadcast use of

advanced television (ATV) techniques would be in the public interest. Tentative Decision ¶¶ 4, 39. This conclusion is rooted both in the Commission's responsibility to encourage new technologies and the highest and best use of the radio spectrum, 47 U.S.C. §§ 157, 303(g), and in the benefits that the terrestrial broadcast system provides to the American public, benefits which remain unique even in today's rapidly changing home video market. Id. ¶ 39.

Terrestrial broadcast service alone is universal and free to the viewer, reaching 99 percent of the homes in the United States. This constitutes an invaluable communications resource that is available instantly in times of crisis and for important national events such as the recent presidential debates. Pay media are unlikely ever to achieve such reach across all communities and all segments of society.

Moreover, only terrestrial broadcasters provide locally oriented news, public affairs and entertainment programming to virtually every community in the nation. Erosion of the local broadcast system would threaten this "fair, efficient and equitable distribution" of television service, see 47 U.S.C. § 307(b), leaving the nation with an increasingly centralized information system.

There is no substitute now available for the localized service offered by broadcasters, nor is any substitute on the horizon. National media such as DBS and videocassettes are inherently unsuited to assume this role. Cable systems are

under no obligation of public service, and those few that have volunteered to provide local programming will require years to develop news and public affairs operations on a par with local broadcasters. Cable service in many communities is fragmented and no single operator has the resources to support high quality local programming for an entire metropolitan area. In the few places where cable makes a serious local-programming effort, it is a valuable addition to the diversity of local voices. But most viewers have access to only one cable system, and a single cable news organization could never substitute for the multiple independent news operations now offered in each market by terrestrial broadcasters.

We concur also with the conclusion that the ability to implement ATV is essential to the long-term viability of the local broadcast system. ATV systems with an extraordinary array of innovations could well be available to home viewers in the next two to five years via nonbroadcast media. NTIA Telecom 2000 at 502. These systems could redefine the standard of technical quality in television for many years to come, just as color television surely and steadily supplanted black and white.

The increasing sophistication and discrimination of television viewers suggest that once the public becomes accustomed to these advances, it will demand higher quality in all its video viewing. Any transmission medium that cannot deliver competitive ATV quality will not be able to survive in

the video marketplace, and viewers will lose the benefits of the diversity and competition that medium provides.

If broadcasters are to continue to provide their historical high level of service to the public, they must have the opportunity to compete with other media, and to progress to ATV along with their audience. The infrastructure of terrestrial broadcasting -- including physical plant, technical and programming expertise, established and experienced organizations, and networks and other distribution systems -- represents an enormous investment in a valuable national resource. It must not be allowed to become obsolete.

The undersigned broadcasters are committed to providing the capital investment necessary to maintaining the highest, fully competitive level of service. However, as noted in the Tentative Decision, "the broadcast industry is unique in that it is governed by a complex and interrelated set of both spectrum management and compatibility rules." Tentative Decision ¶ 1. More than any other medium, terrestrial broadcasters are dependent upon the Commission to give them the opportunity to participate in ATV. The timely availability of sufficient spectrum and the timely promulgation of a competitive and compatible ATV transmission standard are absolutely essential to the successful development of broadcast ATV. But, as we emphasize below, while Commission action is necessary, premature allocation and standardization decisions could stunt that development or lock broadcasters into an inferior format

that will cripple the medium forever. Efforts are already underway that will provide the necessary foundation for informed policy making; only in this manner can the Commission assume that the public interests will be served.

II. The Commission Should Make Supplemental ATV Spectrum Available To Existing Licensees Without Entertaining Competing Applications From Non-Licensees.

The Tentative Decision is clearly correct in its preliminary determination that if broadcast ATV requires supplementary spectrum it would be both in the public interest and consistent with the Communications Act to assign that spectrum to current broadcast licensees without accepting competing applications from non-licensees. Tentative Decision ¶¶ 136-38.

This finding flows first from the public interest determination that the current nationwide system of free and universal terrestrial television service is a unique and valuable resource and that the ability to provide ATV will be essential to the long-term health and viability of that resource.

Moreover, we believe it also to be clear that allotting additional spectrum to existing licensees will encourage the more rapid development of advanced television. Tentative Decision at ¶ 136. Broadcasters' established facilities, combined with their technical and programming experience, provide a strong foundation for ATV. The availability of popular and familiar broadcast programming in an

ATV format will encourage viewers to adopt ATV and help penetration of the new technology reach the critical mass necessary for wide acceptance. Existing licensees can quickly organize the resources and expertise to compete vigorously with other media so that the earliest nonbroadcast entrants do not seize dominance over the emerging ATV market and foreclose future competition. Broadcasters are uniquely qualified to move quickly into this new field, just as the current cellular companies were uniquely qualified to utilize additional cellular radio spectrum quickly and efficiently. 900 MHz Reserve Band Allocations, 61 RR2d 165 at ¶¶ 10-26 (1986). In addition, assuring a place for existing licensees is essential to an orderly transition that protects public reliance on continued NTSC broadcasting while promoting the development of ATV. As discussed in § V, infra, this transition can be accomplished through either an augmentation or simulcast approach. Under the augmentation approach, the additional channel is useless for its intended purpose to anyone who has no basic NTSC channel to augment. Therefore, assignment of augmentation channels would necessarily be limited to existing licensees.

Similarly, if a non-compatible simulcast system is adopted, only broadcasters are suited to accomplish an orderly transition. Assigning the initial ATV channels to new operators would lead to one of three unattractive alternatives: (1) delay indefinitely through regulation the conversion of existing NTSC channels to ATV, forcing existing operators to bear the entire

cost of protecting a steadily dwindling number of viewers while slowly eroding a vital local broadcast system that has taken years to establish; (2) allow the existing NTSC channels to convert to ATV at will, prematurely ending the "transition" by abandoning a significant number of NTSC-only viewers before those viewers are prepared to convert to ATV; or (3) displace the existing licensees at some point in the future in order to reclaim their channels for other uses, destroying their value and eliminating the service they provide to the public. It is simply wasteful to reinvent the entire structure of broadcasting to accommodate each new technical improvement. These problems can be avoided only if the same licensee provides both ATV and NTSC service during the transitional period.

Nor can there be any doubt that limiting supplemental channels to existing licensees would be fully consistent with the Communications Act. The sole basis for any claim to the contrary lies in the Supreme Court's decision in Ashbacker Radio Corp. v. FCC, 326 U.S. 327 (1945), where the Court found that Section 309(e) of the Act requires comparative hearings for mutually exclusive applications. However, "[t]his involves only a matter of procedure." Id. at 333. The Supreme Court also has held that the Commission may establish substantive eligibility criteria for applicants, and dismiss ineligible applicants without a hearing. U.S. v. Storer, 351 U.S. 192 (1956).

Thus the Commission routinely makes new spectrum available only to specific types of entities, for example,

noncommercial educational organizations, see 47 C.F.R. 73.621 (NCE-TV stations), 47 CFR 74.932 (ITFS); local exchange telephone companies, Inquiry Into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems ("Cellular Order"), 86 F.C.C.2d 469, 487-95 (1981); cellular licensees, 900 MHz Reserve Band Allocations, 61 RR2d 165 at ¶¶ 10-26 (1986) (additional spectrum granted to 2 current cellular licensees in each market without application); or existing television licensees, Establishment of Spectrum Utilization Policy for the Fixed and Mobile Services Use of Certain Bands Between 947 MHz and 40 GHz, 52 Fed. Reg. 7142 (1987) (TV Auxiliary); Use of Subsidiary Communications Authorizations, 48 Fed. Reg. 28145 (1983) (TV stereo); Transmission of Teletext by TV Stations, 48 Fed. Reg. 27054 (1983) (Teletext).

It is inconsequential whether the additional spectrum would be used merely to augment the existing channel or to provide a "distinct", second-channel program service.[1] Under either approach, all that is required is that the Commission's action be grounded in adequate record evidence that it will further the public interest and not otherwise be inconsistent

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[1] As Commissioner Quello notes, Separate Statement at 3, use of a separate, stand-alone channel would be more difficult to justify on the grounds that it is merely augmenting the initial service, if the second channel is in fact used to provide a distinct programming service. But a partially or even wholly distinct programming service could itself be justified, indeed, may well be necessary, to provide broadcasting with the necessary revenues to make this costly transition.

with the Communications Act. TV stereo is an augmentation of current service, and TV auxiliary stations support current service, but teletext and cellular radio were new and distinct services for the limited class of eligible applicants.

The only thing these diverse eligibility standards have in common is that each rests on the Commission's finding that the eligibility rule promotes the public interest. "The Commission is not, of course, permitted to proceed pursuant to rules that are inconsistent with the underlying intent and purpose of the Communications Act. Citizens Communication Center v. F.C.C., 447 F.2d 1201, 1212-1214 (D.C.Cir. 1971)." Gottfried v. F.C.C., 655 F.2d 297, 301 n.7 (D.C.Cir. 1981). But it need not entertain competing applications and hold hearings to endlessly rehash policies that have been settled by rulemaking. Storer, 351 U.S. at 202-05.

The manifold and weighty public interest considerations described above, in particular the need to assure a smooth and unbroken terrestrial broadcast transition to ATV, provide a substantial, indeed compelling, basis for limiting eligibility to existing licensees. The additional decision whether ultimately to employ an augmentation approach or separate channel approach will flow from the comprehensive factual inquiry now under way into the feasibility and competitiveness of proponent ATV systems. Whichever approach is adopted, it will provide ample justification for the

determination to grant the additional spectrum to existing licensees.

III. The Freeze On New Assignments And Further Sharing Of The UHF Band Should Be Continued.

We strongly support the decision to maintain the freeze on new television station license applications in 30 major markets and to continue to defer action on additional sharing of the UHF band by land mobile radio. Tentative Decision ¶ 96.

There are substantial technical, economic and political reasons to locate supplemental broadcast ATV spectrum in the existing VHF and UHF broadcast bands. Tentative Decision at ¶¶ 75-81. Though the Commission should not now foreclose the possibility of utilizing nonbroadcast spectrum, see § VII, infra, the VHF and UHF bands remain the optimum, indeed, quite possibly the only available source of supplemental ATV spectrum.

The sole reservation about the use of these bands, and it is a significant uncertainty, is whether they hold adequate vacant spectrum to permit broadcast ATV to achieve competitive parity with nonbroadcast media. Use of these bands to implement ATV by means of a 6 MHz stand-alone "simulcast" channel, for example, should such an approach be necessary, will require the development of a radical new transmission scheme that is far

hardier and more benign than the current system.[2] Fortunately, proposals for just such schemes are now surfacing. See, e.g., Proposal for Zenith Spectrum Compatible HDTV System (Sept. 1, 1988) (submitted to Advisory Committee SS/WPI). It will be some time, however, before we know whether these systems, and the many other potentially useful solutions that have been put forward, will perform as well in the field and in the home as they perform on paper and in the laboratory.

But, as the Tentative Decision recognizes, we know already that any loss of VHF or UHF spectrum in these markets would "inevitably" affect the options available for providing broadcast ATV in the VHF and UHF bands. Tentative Decision ¶ 96.

On the other side of the equation, it is apparent that there is no urgent need to release VHF and UHF spectrum to new stations or new services. Whatever the significance in other contexts of the current plethora of broadcast stations and other video services, see Complaint of Syracuse Peace Council Against WTVH, 2 FCC Rcd. 5043, 5051 (1987), there is no immediate need for additional broadcast or other stations in the top markets affected by the freeze. And the demands by land mobile for

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[2] The tables at ¶ 68 of the Tentative Decision, based on OET studies, show that new ATV stations would have to be as close as 100 miles for all existing licenses to be accommodated. The current minimum spacings are 154.5 to 219.5 miles. These spacings translate into co-channel separation ratios of as little as 10 db D/U or 18 db less than the current minimum.

additional spectrum have now been exposed as artificially bloated and certainly far less significant than previously portrayed. See FOB 9/18/85 Working Paper on the 800 MHz Land Mobile Channel Occupancy; 1986 FOB Monitoring Data (Atlanta); FOB Active/Inactive Licensee Survey (FY 1985).

In any event, additional station licensing and/or land mobile reallocation cannot be properly investigated until specific ATV allotment plans have been been developed, and specific allotment plans cannot be developed until the technical analyses regarding candidate ATV systems and approaches are concluded.[3]

Broadcasters, too, have a great stake in seeing that ATV system selection is accomplished as rapidly as possible. But until that system is selected or, at the very least, the list of candidate systems greatly narrowed, the entire existing VHF and UHF broadcast bands remain an indispensable resource and must be preserved.

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[3] Moreover, as the Tentative Decision implicitly recognizes, it would greatly complicate and delay the planning process for ATV, and perhaps even system development, to alter the amount and configuration of VHF and UHF spectrum available in the major markets. The OET spectrum studies, for example, are an extremely commendable and useful planning tool for both policymakers and transmission system designers. But they are also time-consuming, expensive and computer-resource intensive. And they are based on the current allotment and licensing pattern. Lifting the freeze would require constant recalculation of these studies as new users removed various channels from consideration for ATV.

IV. The FCC Should Adopt Transmission Standards For Terrestrial Broadcast ATV.

The Commission should declare now that it will either establish a mandatory single system standard or set of related, compatible standards for ATV terrestrial broadcast transmissions or, at minimum, take whatever steps are necessary to protect any consensus standard that emerges from the broadcast industry. Only by endorsing first the concept of a single standard and, at the appropriate time, a particular standard itself can the Commission properly assure the rapid, yet orderly development of ATV in the interests of both broadcasters and viewers. See Tentative Decision at ¶ 113. Given the likely significance of ATV to the health and even the survival of terrestrial broadcasting, the Commission simply cannot risk the sort of extended stalemate and counterproductive competitive conflict that has attended its hands-off approach to such innovations as AM stereo.

As noted in the Tentative Decision, ATV broadcast transmission system standardization may be of particular importance in assuring the availability of adequate spectrum. Tentative Decision at ¶ 114. An excellent example of this interplay between standardization and spectrum availability is provided by Zenith's "Spectrum Compatible HDTV System." The Zenith system utilizes a number of innovative techniques to achieve a predicted co-channel D/U ratio (ATV-to-NTSC) of as little as 3 dB, reducing current co-channel separation distances

by as much as 140 miles. If the constructed system performs as predicted, the Zenith system will make it possible for every existing station to obtain an additional 6 MHz of spectrum in the VHF or UHF bands. Critical to its success, however, is the ability of the Zenith system to synchronize its signal with the existing NTSC signals in the environment. Proposal for Zenith Spectrum Compatible HDTV System at 9 (Sept. 1, 1988). Permitting the use of non-NTSC synchronized signal formats might greatly reduce the interference-free service areas of stations using the Zenith system or similar systems.

The dangers of premature imposition of arbitrary constraints on ATV development, principally the adoption of an inferior system and with insufficient flexibility to innovate, are also undeniably significant. Tentative Decision at ¶¶ 115, 120. While there is no mechanism that is absolutely certain to preclude this possibility, the dangers can be significantly ameliorated by reliance upon appropriate industry-wide testing and advisory bodies, at least where, as here, there is evidence that such bodies are proceeding with great vigor and universal participation.

The activities of the Commission's Advisory Committee and other voluntary advisory and testing organizations listed in the Tentative Decision, see ¶ 121, are well known to the Commission. In addition, the broadcast industry has undertaken a massive effort to evaluate proposed ATV systems and determine the transmission standards that are best suited to conditions in

the United States. In the coming months, the Advanced Television Test Center, a body established and funded by many of the undersigned and other broadcast companies, plans to conduct both laboratory and over-the-air tests of the various systems, measuring their signals by objective technical criteria and conducting psychophysical tests to determine the subjective reactions of television viewers. This program is designed and intended to provide the appropriate industry advisory bodies with the data necessary to make an informed judgment.

After the Test Center's work is completed, industry representatives will be ready to meet in an appropriate forum, in a fair and open manner, to work toward a consensus on ATV standards that can be presented to the Commission. Such a consensus, reflecting the realities of the marketplace, would offer the best opportunity for a standard that can be quickly and successfully implemented. The standard for broadcast multichannel sound recommended by the Broadcast Television Systems Committee, effectively adopted by the Commission, see Use of Subcarrier Frequencies in the Aural Baseband of Television Transmitters, 55 RR 2d 1642 (1984), and now in place throughout the nation, well illustrates the potential effectiveness of this process. But the effectiveness of the process is crucially dependent upon the clear and unequivocal understanding of the participants from the outset that the Commission will insist on a consensus product of the industry

deliberations and will take all measures necessary to assure that this output is implemented.[4]

V. Service To NTSC Receivers Should Continue During The Transition To ATV.

We strongly support the tentative decision in favor of protecting and preserving service to NTSC receivers during the transition to ATV. Tentative Decision ¶¶ 123-25. Only in this manner can the Commission protect the public's massive investment in NTSC equipment, preserve the uniquely valuable universal reach of the local broadcast system and assure the timely entry of local broadcasters into the ATV marketplace.

This "compatibility" could be achieved, of course, by transmitting ATV signals that could be received as NTSC signals by NTSC receivers. Alternatively, it could be achieved by augmenting NTSC signals without degrading NTSC reception or by

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[4] The Tentative Decision also queries whether it would be sufficient to adopt a standard employed only for allocation and assignment purposes. Tentative Decision ¶ 117. We believe it highly unlikely that such a standard will prove to be useful except as an adjunct to or means of protecting a particular system standard. If adopted at this early stage in system development and testing, for example, a specific allotment plan will carry very high risks of improperly restricting ATV development unless it is so conservative as to provide little benefit in either guiding system developers or reducing the amount of spectrum currently affected by the freeze on broadcast spectrum. At this point, the total spectrum requirements (6-12 MHz), channel configurations (6 MHz, 6+3 MHz, 6+6 MHz) and propagation and interference characteristics (e.g., 0-50+ db D/U co-channel separation) of the currently proposed ATV systems encompass very large ranges. Tentative Decision at ¶¶ 22-37. As noted above, see § III, supra, even a very spectrum-efficient system will require virtually all of the available VHF and UHF spectrum in major markets.

"simulcasting" ATV signals on separate channels that cannot be received by NTSC receivers. If enough spectrum is available, any of these routes will be feasible. Moreover, no special regulations will be necessary to protect NTSC service. Economic necessity will lead broadcasters to serve both NTSC and ATV viewers for the foreseeable future.

At this juncture, it appears that additional spectrum will be required for broadcasters to deliver improved ATV signals as technology advances. Although some of the proposed ATV systems promise the transition to full HDTV quality in a single 6 MHz channel (e.g., the Del Rey Group, see Tentative Decision, ¶ 28), most of the developers of proposed ATV systems continue to believe that additional spectrum will be needed for broadcasters to accommodate future advances in display technology that will permit home viewers to enjoy even higher resolution than can now be provided. Interim Report of the FCC Advisory Committee on the Advanced Television Service 6-7 (June 16, 1988); Tentative Decision ¶ 44. For this reason, it is essential that the Commission preserve adequate additional spectrum during the evaluation and adoption of a broadcast ATV system. See § VII, infra.

VI. The FCC Should Encourage ATV Compatibility Between Broadcast And Other Media.

It has become commonplace to observe that where once there was only a single source of television programming, local broadcast stations, the rapidly evolving video marketplace now offers many, including cable, MMDS, DBS, VCRs and others. See,

e.g., NTIA Telecom 2000 at 149; Complaint of Syracuse Peace Council Against Television Station WTVH, 2 FCC Rcd. at 5054. Although this proliferation of program sources carries many consumer benefits, the Commission acknowledges in the Tentative Decision that it presents dangers that complicate the task of implementing ATV. Tentative Decision at ¶¶ 4, 127-34.

The parallel development of alternative ATV delivery media that are incompatible or not interoperable with terrestrial broadcast, could well generate confusion and uncertainty. Investors and viewers, anxious to avoid a system that may not be adaptable or may soon become obsolete, may be reluctant to commit themselves until the compatibility or interoperability questions have been settled. Alternatively, in the rush to be first different media may hastily choose incompatible systems hoping that others will be forced to follow the early leader. The risks of stalemate or chaos are considerable. Intermedia compatibility or interoperability, on the other hand, holds the promise of providing each viewer with the widest choice of program sources and each programmer with the largest potential audience, and of reducing the cost of video equipment through the economies of mass production.

The Tentative Decision, however, expresses the fear that mandating compatibility carries the risk of retarding one or more of the potential delivery systems and asserts that there are market and institutional forces which will tend to ameliorate these risks without government intervention.

Tentative Decision at ¶¶ 132-33. The Tentative Decision concludes that, while the Commission should be "sensitive" to the benefits of compatibility between ATV equipment developed for broadcast and nonbroadcast services, Tentative Decision ¶ 4, "we [do not] intend at this point to require compatibility among the various media or set specific signal or equipment standards for this purpose," Id. ¶ 133.

There can be little doubt that it would be premature at this stage to set specific signal or equipment standards to assure complete intermedia compatibility or interoperability. It would be inadvisable to hamper the development of ATV in non-broadcast media. But there can be no blinking the fact that nonbroadcast ATV may possibly develop in a fashion that threatens to permanently preclude or irretrievably handicap the participation of the local broadcast system in the ATV marketplace. If so, then the public interest benefits provided by that system will surely warrant that the Commission play a more active role than that of "interested bystander." Separate Statement of Commissioner Quello at 6.

We believe it is important for the Commission to declare now not only that the Commission is "sensitive" to the benefits of intermedia compatibility but that it will take whatever steps appear necessary and appropriate, including mandating ATV receiver and signal standards, to assure that local broadcast ATV is not artificially inhibited by the

development of incompatible nonbroadcast ATV systems.[5] By declaring this possibility now, the Commission will promote the prospects of intermedia compatibility and reduce the likely need for more intrusive market intervention.

VII. The Commission Should Not Place Arbitrary Constraints On The Supplemental Spectrum Available For Broadcast ATV.

The amount of supplemental spectrum necessary for ATV will be determined by the transmission standard that is adopted. The spectrum and standards decisions are inseparable. Because of the nascent nature of system development, it is premature to adopt allocation policies. At this point, it remains uncertain whether ATV channels will require any additional spectrum or an additional 3 MHz, 6 MHz, or more, and whether they will operate with contiguous augmentation channels, non-contiguous augmentation channels or incompatible simulcasting. We have virtually no reliable, objective data about the amount of interference that the various ATV systems will cause or withstand, nor about the degree of quality that may have to be sacrificed to achieve narrower bandwidths or NTSC compatibility.

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[5] Indeed, the Commission can and should declare that any ATV system adopted for broadcast must be readily capable of transmission through cable systems. Roughly half of all viewers depend on cable to deliver the signals of terrestrial broadcasters, and cable operators depend on local broadcasters for an important part of their programming. An ATV system that required cumbersome conversion to cable could add needless expense or degrade quality. Such technical barriers to service are not in the interests of broadcasters, cable companies or television viewers.

It is simply impossible to determine spectrum requirements within meaningful parameters until these fundamental system specifications are at least reduced to a narrow range, if not definitively resolved.

Although the Commission could influence the design of broadcast ATV by imposing constraints on spectrum, forcing systems to be designed into narrower channels does not guarantee a satisfactory result. Most important is the likely effect of spectrum limitations on the quality of service. If spectrum limitations lead to inferior system designs, other media, not similarly constrained, will ignore the Commission's standards, complicating the problem of achieving compatibility, and leaving terrestrial broadcasters in a second-class position.

There are now ATV systems proposed which would satisfy and even exceed the stringent limitations necessary to provide broadcast ATV in the current VHF and UHF broadcast spectrum. But these systems are far from being proven out either in the laboratory or in the field. Therefore, although we agree that VHF and UHF spectrum is the far preferable location for supplemental spectrum (see supra at § III), the tentative determination to limit additional ATV spectrum to those bands was premature and incorrect. The FCC should preserve the option of obtaining additional spectrum from frequency bands above 1