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November 16, 1992

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
Washington, DC 20554

Re: MM Docket No. 87-268

Dear Ms. Searcy:

Transmitted herewith on behalf of GHTV, Inc., SCI Television, Inc. and Busse Broadcasting Corporation are an original and four (4) copies of their Comments in the above-referenced proceeding. Kindly refer this material to the Commission.

Should you or the staff have any questions, kindly contact the undersigned.

Sincerely yours,

Neal J. Friedman

Enclosures

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RECEIVED
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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20054

In the Matter of	)	
	)	
Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service	)	**MM Docket No. 87-268**

TO: The Commission

COMMENTS OF GHTV, INC, SCI TELEVISION, INC. AND BUSSE BROADCASTING CORPORATION

GHTV, Inc. ("GHTV")[1/], SCI Television, Inc. ("SCI")[2/] and Busse Broadcasting Corporation ("Busse")[3/] (and collectively "Commenters")[4/], by their attorneys, hereby submit their comments in response to the Second Further Notice of Proposed Rulemaking in MM Docket 87-268, FCC 92-332, released August 14, 1992 ("Second Further Notice").[5/]

1/ GHTV is the corporate parent of the licensees of television stations WTVT-TV, Tampa, Florida; KSBY(TV), San Luis Obispo, California and KSBW(TV), Salinas, California.

2/ SCI is the corporate parent of the licensees of television stations WSBK-TV, Boston, Massachusetts; WAGA-TV, Atlanta, Georgia; WJW-TV, Cleveland Ohio; WJBK-TV, Detroit, Michigan; WITI-TV, Milwaukee, Wisconsin; and KNSD-TV, San Diego, California.

3/ Busse is the licensee of television stations WWMT-TV, Kalamazoo, Michigan; WEAU-TV, Eau Claire, Wisconsin; KOLN-TV, Lincoln, Nebraska and its satellite KGIN-TV, Grand Island, Nebraska.

4/ Commenters have also joined in the broadcast industry comments filed in this proceeding. The instant Comments raise separate issues not addressed in the industry comments.

5/ By Order, DA-1445, released October 20, 1992, the Commission extended the time for filing comments until November 16, 1992.

I. RAPID TECHNOLOGICAL CHANGES DEMAND THAT THE PACE OF ATV CONVERSION SHOULD BE SLOWED

1. The industry comments address in substantial detail the significant issues related to ATV channel allotment. Commenters continue to be concerned about the ambitious timetable for conversion. The Memorandum Opinion and Order/Third Report and Order/Third Further Notice of Proposed Rulemaking ("Third Report"), FCC 92-438, released October 16, 1992, modified the construction conversion timetable originally adopted to some degree and provided for periodic reviews of the established deadlines. Commenters continue to be concerned about the risk to those stations that are unable to finance the costs of conversion to ATV. Estimates vary, but there is general agreement that the minimum cost for a pass-through of a network signal will be in excess of $1 million. Complete conversion, which would be required to meet the mandate of full simulcasting within nine years of the start of the construction/conversion period, could cost upwards of $10 million.

2. For most television stations, these costs represent many times more than they would normally spend for capital improvements. Stations are being asked to make this investment at a time of great uncertainty in the television industry, which the Commission itself has recognized. In response to the 1991 report of its Office of Plans and Policy on the changing video marketplace, which detailed the drop in audience share and revenues for television stations in

recent years and the bleak outlook for future growth[6], the Commission issued a Notice of Inquiry[7].

3. It is quite likely that will not act on the Notice until a new Chairman has been appointed and confirmed following the change in the Administration. Therefore, it would be prudent for the Commission to adopt an even more conservative course with regard to channel allotments in this proceeding. Commenters respectfully suggest that the Commission pair existing NTSC licensees with ATV allotments for the entire 15-year construction/conversion period. At the end of the 15-year period, licensees would be required to surrender their NTSC license. This would not impair the orderly development of ATV nor would it unjustly reward those licensees who might drag their feet in converting to ATV. By pairing allotments for the entire 15-year period, existing NTSC licensees could convert to ATV in response to natural market forces rather than artificial timetables developed without regard to consumer demand. This approach would not slow the ultimate conversion to ATV since full conversion would still be achieved after 15 years in accord with the Commission's own timetable.

4. Throughout this proceeding, the Commission has referred to "Advanced Television Systems" ("ATV") rather than high definition television ("HDTV"), which has been the focus of much of the atten-

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[6] Office of Plans and Policy, Working Paper No. 26, Broadcast Television in the Multi-Channel Marketplace, 6 FCC Rcd 3996 (1991).

[7] Review of the Policy Implications of the Changing Video Marketplace, 6 FCC Rcd 4961 (1991).

tion in the industry. The wisdom of the Commission's approach is now being borne out as it appears that a number of options in addition to HDTV may be available to broadcasters and consumers under the ATV umbrella. Commissioners Sherrie Marshall and Erwin S. Duggan both alluded to this in their separate statements accompanying the Third Report. Commissioner Marshall suggested that "broadcasters must become multichannel providers to continue to flourish in the long run." Commissioner Duggan cautioned that "rapid progress in digital technologies means that HDTV will be just one morsel on a vast and sophisticated communications menu."

5. The inescapable conclusion is that technology is changing faster than the law can anticipate. The Commission's decisions in this proceeding should be geared to the possibility that the market may anoint some technology other than HDTV as "the people's choice." Not every technology that is offered to the market is accepted. Quadrophonic sound and laser disks were put on the market with great expectations that simply failed to materialize. No regulatory initiative was required for these technologies, but it is easy to imagine the chaos that would have resulted had the government mandated a technology that the market refused to accept.

6. It may very well be that improvements such as ghost-canceling, which would eliminate the last remaining imperfection in over-the-air television, and digital transmission, which would allow for multichannel broadcasts and sharper images, will satisfy consumer demand. It is equally likely that HDTV, which requires very large and expensive receivers, will simply not be practical for

home viewing by consumers who find television screens no larger than 24 inches more than adequate for their purposes. The large-screen HDTV format may only be suitable for theaters and public places.

7. Mandating conversion on an arbitrary and perhaps unrealistic timetable without regard to technological change or economic realities is not judicious. The Commission should take the same approach with ATV as it did with color television. It should adopt the transmission standard and then let the marketplace decide the pace at which conversion occurs. The ambitious and perhaps unrealistic timetable the Commission has proposed will not serve the public interest if the result is that independents and small to medium market network affiliates are thrown into bankruptcy or, worse yet, shut down because they are unable to make the investment required to meet the Commission's deadlines.

8. The financial difficulties facing many commercial stations are no less severe than those facing non-commercial stations, which the Commission has recognized in the Third Report at paragraphs 28-29. The Commission noted the assertions of public television broadcasters that "non-commercial entities require substantial periods of time to arrange financing of the magnitude required for the ATV transition." Id. The Third Report fails to take notice of the fact that arranging financing of the magnitude required for conversion to ATV will be no less time consuming and difficult for commercial stations. The alternatives suggested in paragraph 29 of the Third Report for which the Commission seeks comment are applicable as well to commercial stations. Commenters will address these issues in

greater detail when comments are filed in response to the Notice. The Commission should, however, recognize that non-commercial and commercial broadcasters face similar economic difficulties and any concessions that are made to non-commercial television stations should be afforded to commercial stations as well. Commercial and non-commercial stations together make up the fabric of American broadcasting. The loss of even a single station, commercial or non-commercial, is equally devastating to the community that station had served. The Commission must, therefore, guard against any precipitous action that could damage, even inadvertently, the nationwide system of broadcasting.

II. "PACKING" ALL STATIONS INTO THE UHF BAND COULD RESULT IN SUBSTANTIAL LOSS OF SERVICE

9. The Commission has also proposed to "pack" all ATV stations into the UHF band. The industry comments address this issue in some detail, but one additional point should be made. While the Commission has stated that packing all television stations into the UHF band will free the VHF band for other purposes, the Commission has not said what demand, if any, exists for VHF spectrum. The fact of the matter is that the VHF band is uniquely suited for television broadcasting and not much else. No users have come forward to demonstrate a need or desire for the vacated spectrum. Certainly, there has been no demonstration of a use for the VHF band that would outweigh loss of service that will result if all television stations are packed into the UHF band. This loss will be particularly acute in rural areas that will not be served by ATV stations in the UHF band, but are now served by NTSC stations now operating in the VHF

band. These areas are not presently served by cable systems and, even if DBS were to become a reality, it would not be a substitute for the local service that only local broadcasters can provide. The proposal to pack all stations into the UHF band is a solution in search of a problem. The end result will be a problem for which there can be no solution.

III. THE DRAFT TABLE MAY RESULT IN DESTRUCTIVE INTERFERENCE

10. Commenters recognize that the draft table is just that -- a very preliminary draft. Commenters asked their consulting engineer, Neil Smith of the firm of Smith & Powstenko, to analyze the proposed allotments for the communities Commenters serve. Mr. Smith's report is attached. He notes, as an initial matter, that the Commission's draft allocation table employs spacing assumptions that would permit a 55-mile ATV service range rather than a 65 to 75-mile range of many NTSC facilities. Mr. Smith goes on to state that, in a number of instances, even the 55-mile service radius would not be available in certain directions.

11. Mr. Smith finds a flaw in the Commission's theory that adjacent channel stations separated by no more than five miles may be considered co-located, which would preclude interference. Although the idea works in theory, it does not work in practice because the actual field strengths are not nearly as homogeneous as calculations might presume. Reflections and refractions, particularly in built-up areas, cause signal strengths to vary substantially, especially in the UHF band where all ATV operations are proposed to be ultimately.

The potential for interference that is possible when stations are co-located, is even greater where two sites are within five miles of each other. The severity of the problem cannot be calculated precisely since the Commission has not yet made public the geographic coordinates for its assumed sites. Mr. Smith, however, has identified potential problems in a number of the markets commenters serve. These are discussed more fully beginning at Page 4 of Mr. Smith's statement and in the attached tabulation.

Mr. Smith identifies problems in roughly one-third of the markets served by Commenters' stations. Commenters' stations are presently on both VHF and UHF channels in all parts of the country, including large and small markets. They are, therefore, a representative cross-section of the television industry as a whole. Loss of service and interference to one-third of the television stations in the nation is simply not acceptable. The public interest losses from such an allocation scheme cannot be outweighed by whatever benefits may accrue from the conversion to ATV. Commenters do not have the resources to develop an alternate draft table of allocations; however, these comments are submitted in the spirit of

pointing out interference and loss of service concerns that the Commission should consider in preparing a final table of allocations.

Respectfully submitted,

GHTV, INC.
SCI TELEVISION, INC.
BUSSE BROADCASTING CORPORATION

By _____
Vincent A Pepper

By _____
Neal J. Friedman

Their Attorneys

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November 16, 1992

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ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of GHTV, INC.; SCI TELEVISION, INC.; and BUSSE BROADCASTING CORPORATION in support of their Comments on the *Second Further Notice of Proposed Rule Making* in MM Docket No. 87-268.

This *Notice* contains a draft table of ATV allotments. The table was intended to include an ATV channel for each NTSC allotment, and it appears to have done so. It was also intended that the ATV service range would equal the NTSC service range of each station. However, this goal will not be met. Instead, the plan has employed spacing assumptions that would permit a 55-mile ATV service range, not the 65- to 70-mile range of many NTSC facilities. Of course, due to random factors, ATV stations on some channels would probably enjoy a greater service range, but this would be in spite of the plan, not because of it.

In addition, the Commission has proposed a number of allotments that do not even meet its intended spacings, so that, to one extent or another, these particular allotments would not even permit the 55-mile service radius, at least in certain directions. It appears that if enough ATV channels are to be allotted so that each NTSC station can have one, it is inevitable that, with the approach being taken, some of the allotments would be substandard.

One recurring problem involves the use of first-adjacent-channel allotments in the same community. The Commission's model predicts interference when adjacent-channel stations, whether NTSC or ATV, are separated by more than 5 miles but less than 55 miles. Since 55 miles is the assumed limit of service, it is logical to assume that adjacent-channel stations beyond this distance would have no adverse effect. However, in the real world, where our cities are not laid out in a perfect geometrical matrix, there will be certain directions in which each station's closest co-channel assignment is much farther away than the required minimum. Under such circumstances, ATV service might otherwise extend well past 55 miles in these directions, and adjacent-channel stations 56 miles away would indeed cause interference.

Of greater concern is the idea that adjacent-channel stations separated by no more than 5 miles may be considered colocated, which would preclude interference. This idea works in theory, because there is a positive interference ratio; that is, interference occurs only where the undesired signal is significantly stronger than the desired signal. If the two stations are exactly colocated and operate with identical power and height, their signals will be equal everywhere, and neither could interfere with the other.

The fallacy of this approach is that actual field strengths are not nearly as homogeneous as our calculations presume. Reflections and refractions, particularly in built-up areas, cause signal strengths to vary

substantially as a function of location, and such variations are quite severe in the UHF band, where virtually all ATV operations will be. Thus, even where the actual *median* field strength agrees exactly with prediction, it would not be unusual to find a variation of ±20 db on a location-to-location basis. With such variations, two seemingly identical stations could have field strengths that differ by as much as 40 db at specific locations, and interference could result where it had not been predicted. For this reason the idea of colocation as a way of controlling adjacent-channel interference is suspect, at best.

To the extent that the Commission may share some of these misgivings, it may rationalize its way out of them by considering them largely a temporary problem. Adjacent-channel colocation is seldom used between ATV stations but often used between an NTSC station and an ATV station. Since the NTSC station is to disappear in 15 years, the interference would also disappear at that time. Of course, if interference were sufficiently severe, the NTSC station might go off the air sooner than the Commission thinks.

In addition, since the concern in this regard would apply to truly colocated facilities (identical location and height), it would apply even more strongly where the two facilities are simply close together and similar. The allotment scheme has not considered antenna height at all and has assumed colocation where the two sites are within 5 miles of each other. A 5-mile separation between colocated sites is a contradiction in terms,

particularly where terrain variations are significant.

This is made worse by simplifying assumptions and rounding. Existing stations within 3 miles of each other are considered to be using the same site, and adjacent-channel stations are considered to be colocated if they are within 5 miles of each other. Since these separations are rounded to the nearest mile, "colocated" stations could be almost 9 miles apart under this plan. By the same token, the actual spacings to co- and adjacent-channel stations will not necessarily turn out to be within the ranges assumed by the Commission.

The Commission has identified the ATV allotments that are substandard and has indicated the nature of the problem(s). In many cases one can figure out which co-channel or adjacent-channel NTSC allotments are causing the problem, but this is not always possible. Indeed, since the Commission has not made the geographic coordinates of each assumed ATV site public, it is often impossible even to know which channel(s) may be intended for which station(s).

The attached tabulation identifies the problems associated with certain GHTV/SCI/Busse markets. This data may be discussed as follows:

KSBW, Salinas, California • Channel 58 is subject to co-channel interference, but terrain factors may mitigate these effects.

KNSD, San Diego, California • While VHF ATV channels may appear attractive, most have serious problems. Channel 9 has local full-facility stations on both adjacent channels and would be subject to

co-channel interference from Los Angeles, because of the unusual propagation conditions along the coast. The other U. S. allotments might not produce real interference, because of terrain variations and established viewing patterns. The Mexican problems may be even more theoretical, since there are few actual Mexican UHF stations, and service in Mexico is of relatively little commercial importance.

WTVT, Tampa, Florida • If used at the WTVT tower, ATV Channel 17 would be adjacent to WUSF-TV, 2.4 miles away, creating potential interference problems. The other channels are usable.

WSBK-TV, Boston, Massachusetts • Except for Channel 54, all have real problems. Indeed, since both Channels 54 and 55 are ATV allotments, it may be that ATV adjacent-channel interference may affect Channels 54 and 55. To make the best of a bad lot, WSBK-TV might opt for Channel 39, so that it would be adjacent to itself. Under such circumstances it would have at least some control over the situation, and where interference exists on one channel, the other should be available.

WJBK-TV, Detroit, Michigan • With Channel 21, Channel 20 would be 5.3 miles away, trying to be colocated, and Channel 27 would serve as an interference source in Windsor, Ontario. If the four clean channels weren't available, Channel 41 might be adequate, since interference would be fairly far away from the bulk of the market.

WMMT, Kalamazoo, Michigan • Use of Channel 20 might involve modest

co-channel interference from Detroit. Channel 26 is clean.

WJW-TV, Cleveland, Ohio • Co-channel interference on Channel 20 should fall generally in Lake Erie, but the adjacent-channel NTSC operation 2 miles away could spell trouble. Channel 53 would seem only a little better. The other channels are clean.

WITI-TV, Milwaukee, Wisconsin • Channels 19 and 59 have "colocated" adjacencies as problems. The other channels are clean.

Altogether, approximately 30 percent of the allotments to the communities of concern herein are substandard to one extent or another. Even though the final table may differ markedly from that under study, it would seem likely that any table devised on a similar basis would contain about the same proportion of substandard allotments. This potential for serious interference to existing NTSC operations and/or to new ATV facilities must be resolved before any ATV channels are finally allotted.

NEIL M. SMITH

November 16, 1992

COMMENTS ON PROPOSED ATV ALLOTMENTS

GHTV/SCI/BUSSE STATIONS

Call	Location	ATV Channel	Comments	Dist. (mi.)
KSBW*	Salinas, Calif.	28 (Site 1)	OK	
		58 (Site 2)	Co-ch, KSCH-TV, Stockton	103
KNSD	San Diego, Calif.	9	Adj Ch. 8, KFMB-TV, San Diego	21
			Adj Ch. 10, KGTV, San Diego	21
		55	Co-ch. ATV, San Bernardino	112
			2 adj channels in Mexico	?
		63	1 adj channel in Mexico	?
		65	Co-ch. ATV, Los Angeles	125
			1 adj channel in Mexico	?
WTVT	Tampa, Fla.	17	Adj Ch. 16, WUSF-TV, Tampa	2.4
		19	OK	
		29	OK	
		57	OK	
		59	OK	
		60	OK	
WSBK-TV	Boston, Mass.	39	Co-ch. ATV, Bridgeport, Conn.	118
			Adj Ch. 38, WSBK-TV, Boston	0
		43	Adj Ch. 44, WGBX-TV, Boston	1.0
		49	Adj Ch. 48, WYDN, Worcester	53
			Adj Ch. 50, WNDS, Derry, N. H.	31
		54	OK	
		55	Adj Ch. 56, WLVI-TV, Cambridge	0
		65	Co-ch. WEDY, New Haven, Conn.	111
			Adj Ch. 64, WNAC-TV, Providence, R. I.	30
			Adj Ch. 66, WHSH, Marlboro	15
		67	Adj Ch. 66, WHSH, Marlboro	15
			Adj Ch. 68, WQTV, Boston	7.6

Call	Location	ATV Channel	Comments	Dist. (mi.)
WJBK-TV	Detroit, Mich.	21	Adj Ch. 20,WXON, Detroit	5.3
			Adj Ch. 22, Windsor, Ont.	32
		41	Co-ch. WOOD-TV, Battle Creek	114
			Adj Ch. 42, Sarnia, Ont.	56
		44	OK	
		45	OK	
		57	OK	
		58	OK	
WWMT	Kalamazoo, Mich.	20	Co-ch. WXON, Detroit	115
		26	OK	
WJW-TV	Cleveland, Ohio	20	Co-ch. WXON, Detroit, Mich.	113
			Adj Ch. 19, WOIO, Shaker Hts.	2.0
		31	OK	
		53	Co-ch. WPGH-TV, Pittsburgh	108
			Co-ch. London, Ont.	111
			Adj Ch. 52, WGGN-TV, Sandusky	56
		63	OK	
		65	OK	
WITI-TV	Milwaukee, Wisc.	19	Adj Ch. 18, WVTV, Milwaukee	0.6
		22	OK	
		28	OK	
		34	OK	
		43	OK	
		45	OK	
		46	OK	
		59	Adj Ch. 58, WDJT-TV, Milwaukee	3.7

Unable to establish which is pertinent site