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

ORIGINAL FILE

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

RECEIVED
NOV 16 1992
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

To: The Commission

JOINT COMMENTS

Schwartz, Woods & Miller, on behalf of Arizona State University; Charlotte-Mecklenburg Public Broadcasting Authority; Florida West Coast Public Broadcasting, Inc.; Greater New Orleans Educational Television Foundation; KTEH-TV Foundation; Maryland Public Broadcasting Commission; Metropolitan Board of Public Education; Michigan State University; New Jersey Public Broadcasting Authority; Oregon Commission on Public Broadcasting; QED Communications Inc.; Rogers State College; South Florida Public Telecommunications, Inc.; University of North Carolina; Virgin Islands Public Television System; Western New York Public Broadcasting Association and WHYY, Inc. (collectively referred to herein as "the Joint Parties"), pursuant to Section 1.415 of the rules, hereby files these comments in response to the Commission's Second Further Notice of Proposed Rulemaking released August 14, 1992 (FCC 92-332) (the "Notice") in the above-captioned proceeding respecting implementation of Advanced Television Systems (ATV) and their impact on the existing television broadcast service. In support thereof, the following is shown:

No. of Copies rec'd 0+4
List A B C D E

1. The Joint Parties are licensees of public broadcast facilities serving markets throughout the United States. Some operate a single transmitting facility while others operate multiple transmitting facilities to provide either dual program or broad network service. Cumulatively, these licensees serve millions of people. The Commission's ATV proposal has dramatic implications for future broadcast operations. As noncommercial licensees the Joint Parties are vitally concerned that the Commission adopt rules and regulations which encourage development of ATV service in a manner that does not foreclose implementation of such service by public broadcasters. Accordingly, the Joint Parties urge the Commission to proceed with the development of ATV with due regard for the considerations set forth below.

2. The proposed timetable. The Commission has proposed a timetable which entails construction of ATV facilities within approximately six years of the adoption of the ATV Table of Allotments, with full conversion over a 15-year period.[1] This proposed timetable for transition to an ATV broadcast service is short and frankly unrealistic, particularly in the case of public broadcasters with multi-transmitter operations. Even many single-transmitter public television stations are unlikely to have the necessary funds needed to construct ATV transmission facilities within this proposed timetable. In fact, due to lack

---

[1] See in this regard, Memorandum Opinion and Order/ Third Report and Order/Third Further Notice of Proposed Rule Making, MM Docket No. 87-268, FCC 92-438, released October 16, 1992 ("Third Further Notice").

of funds, many of these public television stations are on the air using outdated, inefficient transmission systems.[2]

3. For example, some of the Joint Parties are incapable of transmitting programming in stereo, a technology that has been available for more than a decade. Funding for transmitter replacement or other equipment updates has been very limited. Significant additional levels of funding must be secured to convert to ATV. In fact, based upon current conversion cost estimates, each of the Joint Parties faces a minimum expenditure of well over of one million dollars to convert a single transmitting facility to basic ATV service capable of receiving and distributing network programming. These costs do not include ATV program production equipment, nor do they include the additional costs and potentially severe logistical problems associated with the operation of two parallel systems on a single tower. Network operations face costs in the range of tens of millions of dollars to make the transition. For public broadcasters, these are enormous costs -- hundreds of millions of dollars for the system as a whole. In the latter regard, it is clear that the National Telecommunications and Information Administration (NTIA), which provides substantial funding for the current replacement of station transmitting facilities, in no way could fund the overhaul of the public broadcast system based upon current funding levels.

---

[2] In this regard, it should be noted that the National Telecommunications and Information Administration (NTIA) in recent years has acknowledged the fact that the public broadcast industry is characterized by worn out and outdated equipment by altering the funding priorities of its Public Telecommunications Facilities Program to favor replacement of such equipment.

4. The dollars simply are not available within the public broadcast system today to accomplish ATV conversion within the Commission's proposed timetable. It cannot be overemphasized that ATV "conversion" is a misnomer; this new service entails nothing less than wholesale replacement of much of the current NTSC system. These facts, in conjunction with the Commission's "use it or lose it" approach, guarantees relegation of the nation's public broadcast system to secondary status as an outmoded and obsolete delivery system. Such a result emphatically does not serve the public interest in maintaining its publicly funded noncommercial educational television system.

5. For these reasons, the Joint Parties urge the Commission to relax its proposed timetable for public broadcasters generally and for multi-transmitter network licensees in particular. Any timetable must acknowledge that insufficient funds are available to enable ATV conversion within the contemplated time frame; moreover, in the current local and national economic climate, sufficient funds are unlikely to be available except over a long period of time. Any public broadcaster should be permitted whatever time is necessary to secure the requisite funding.[3]

---

[3] In this connection, the Joint Parties observe that in a similar situation special federal legislation and appropriations were made to fund the replacement of the public broadcast satellite system. This project cost hundreds of millions of dollars, and Congress acknowledged that the magnitude of the costs was such that the project could not be accomplished within the normal public broadcast funding base. The Joint Parties applaud the Commission's special concern respecting the ability of public stations to make the conversion to ATV. They wish to stress that nationwide public broadcast ATV conversion is a project which may well depend upon a special appropriation of funds, and the Commission should recognize this fact in its

6. It should be noted that the Commission has acknowledged the special needs of public broadcasters by proposing to retain ATV potential for the current vacant noncommercial reserved channels. Third Further Notice, paras. 33-35). Removing the time constraints from public broadcasters, as urged by the Joint Parties, is entirely consistent with the proposal to hold open the opportunity for ATV operation even for vacant noncommercial allotments. By contrast, imposing a use it or lose it scheme on existing public broadcasters while preserving ATV potential for vacant noncommercial channels would produce the anomalous result of precluding ATV for existing noncommercial licensees who cannot timely convert while preserving the option where no current need existed. The Joint Parties urge the Commission, consistent with its reasoned approach to preserving noncommercial spectrum, to assure that existing noncommercial licensees likewise have every opportunity to convert to ATV. Such conversion is essential to the continued participation by public broadcasters in the nation's broadcast system on a level equal to their commercial counterparts and to other program providers.[4]

7. Noncommercial reserve. The Joint Parties strongly believe that each vacant noncommercial allocation must be kept in reserve for future public ATV. In some cases, currently vacant noncommercial allotments would be activated if funding was available. In any event, the noncommercial reserve

---

application of a timetable to public broadcasters.

[4] In any event, the Joint Parties support the Commission's plan, articulated in the Third Further Notice, to review periodically the feasibility of the deadlines which it ultimately adopts.

has been a bedrock principle of the nation's allocation system, reflecting recognition of the special circumstances which characterize public broadcasting. Those circumstances include a lack of ready access to capital markets and the need for substantial time to complete any planning, approval, funding and construction process, assuming of course that funding can be secured. In addition, many of these vacant allotments are located in less populous areas which typically have little or no public television service. The Commission has a statutory duty under Section 307(b) of the Communications Act to preserve potential service for these areas. The reservation policy was and is designed to protect potential public broadcast service, and it should be maintained. The Joint Parties applaud the Commission's intention, articulated in the Third Further Notice (paras. 33-4), to do so. The loss of these channel allotments solely because of the shortage of currently available channels would have a devastating and long term impact on many communities not adequately served by current public television facilities.

8. UHF spectrum "packing". The Joint Parties support the Commission's proposal to assign all ATV channels to the UHF TV band. This proposal will help to provide a level playing field and insure more uniform television broadcast coverage of all licensees in all service areas. Implementation of UHF channel packing will make more efficient use of the spectrum, reduce system complexities and better control propagation variations common between television bands.

9. ATV Allotment Plan. The Joint Parties urge the Commission to insure that any proposed ATV table of allotments

affords public television stations an equal chance to serve the population. The ATV allotment plan should be designed to favor maximum ATV service area for all licensees and reserved channels after the termination of NTSC service. In this regard, it should be noted that interference to existing NTSC receivers caused by a digital ATV transmitter on adjacent or co-channel operation is significantly less than interference from NTSC to NTSC. Digital ATV interference to NTSC is seen as noise-like, similar to receiving NTSC at a weak level. The ATV allotment table should favor maximum ATV coverage with a tradeoff of a slight reduction in the present NTSC interference protection standards. The Joint Parties believe that the present NTSC service may need to tolerate some degree of potential interim interference if the end result of accepting additional interference would expand the future signal coverage of ATV service.

10. In addition, the Joint Parties have reviewed the Commission's model Allotment Table. This table does not include the vacant noncommercial allotments. Inclusion of such allotments is essential to planning of the Table. Consequently, the Joint Parties urge that any proposed table include consideration of vacant noncommercial allotments.

11. Assignment principle. The assignment principle for ATV channels must assume maximum authorized facilities (full power and maximum tower height). The ATV table should not penalize currently licensed television broadcasters by limiting a station's future ATV service on the basis of the broadcaster's current licensed facilities. In this regard, again due to funding restrictions, many public television stations were built in

the 1960s at operating parameters well below permissible limits and continue to operate their broadcast stations at less than FCC maximum authorized facilities. The new ATV service will require significantly less average transmitter power than that necessary for the present NTSC service. This fact will allow many more public television broadcasters for the first time to efficiently construct and operate television transmission facilities at the maximum allowable power level. The subsequent increase in the amount of maximum service facilities would greatly improve the overall efficiency and signal coverage of the ATV service areas.

12. Pattern shaping. In the Joint Parties' view, the goal of 100 percent ATV accommodation together with the provision of interference protected service similar to the present NTSC service clearly will not be obtainable without careful engineering on a site by site basis. The use of antenna pattern shaping and the careful control of antenna elevation patterns should be mandated when necessary as a tool to insure all equitable service areas. It is common broadcast engineering practice to design television transmission systems to place the maximum peak signal at or slightly preceding the radio horizon. The Joint Parties believe that innovative antenna system design using significantly higher levels of beam-tilt and directional radiation patterns can be utilized to maximize and optimize ATV service areas and should, if feasible, be factored into the final allocation table. This type of pattern shaping would be practical to implement in the UHF band since antenna gain would be moderate. As an added benefit, moreover, higher signal levels within a station's main service area in many cases could be

achieved using increased beam tilt. In short, innovative system engineering is an important means of maximizing and equalizing ATV service areas while controlling interference to ATV and existing NTSC facilities. Consistent with its planned policy, the Commission should aid and encourage broadcasters to cooperate fully in developing optimum ATV facilities.

13. Conclusion. The Joint Parties support the Commission's effort to convert the national broadcast system to ATV and is eager to be a part of the new system. At the same time, it is almost certain that, absent a fresh source of substantial funds, the Joint Parties would be unable to participate fully in ATV conversion if they were required to meet the currently proposed timetable. Further, optimum ATV conversion by the public broadcast system well serves the public interest and will require significant technical cooperation among all licensees. Accordingly, the Joint Parties urge the Commission to adopt rules and policies consistent with the views expressed herein.

Respectfully submitted,

SCHWARTZ, WOODS & MILLER

By: Robert A. Woods
Robert A. Woods

By: Malcolm G. Stevenson
Malcolm G. Stevenson

SCHWARTZ, WOODS & MILLER
Suite 300, Dupont Circle Building
1350 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202)833-1700

Date: November 16, 1992

ATTACHMENT A

ARIZONA STATE UNIVERSITY
Station KAET-TV, Phoenix, AZ

CHARLOTTE-MECKLENBURG PUBLIC BROADCASTING AUTHORITY
Station WTVI, Charlotte, NC

FLORIDA WEST COAST PUBLIC BROADCASTING, INC.
Station WEDU-TV, Tampa, FL

GREATER NEW ORLEANS EDUCATIONAL TELEVISION FOUNDATION
Station WYES-TV, New Orleans, LA

KTEH-TV FOUNDATION
Station KTEH-TV, San Jose, CA

MARYLAND PUBLIC BROADCASTING COMMISSION

Station WMPB-TV, Baltimore, MD
Station WMPT-TV, Annapolis, MD
Station WCPB-TV, Salisbury, MD
Station WWPB-TV, Hagerstown, MD
Station WFPT-TV, Frederick, MD
Station WGPT-TV, Oakland, MD

METROPOLITAN BOARD OF PUBLIC EDUCATION
Station WDCN-TV, Nashville, TN

MICHIGAN STATE UNIVERSITY
Station WKAR-TV, East Lansing, MI

NEW JERSEY PUBLIC BROADCASTING AUTHORITY
Station WNJB(TV), New Brunswick, NJ
Station WNJM(TV), Montclair, NJ
Station WNJS(TV), Camden, NJ
Station WNJT(TV), Trenton, NJ

OREGON COMMISSION ON PUBLIC BROADCASTING
Station KOPB-TV, Portland, OR
Station KOAC-TV, Corvallis, OR
Station KOAB-TV, Bend, OR
Station KTVR-TV, LaGrande, OR
Station KRBM-TV, Pendleton, OR
Station KEPB-TV, Eugene, OR

QED COMMUNICATIONS INC.
Stations WQEX(TV), WQED-TV, Pittsburgh, PA

ROGERS STATE COLLEGE
Station KRSC-TV, Claremore, OK

SOUTH FLORIDA PUBLIC TELECOMMUNICATIONS, INC.
WXEL-TV, West Palm Beach, FL

UNIVERSITY OF NORTH CAROLINA
Station WUNC-TV, Chapel Hill, NC
Station WUND-TV, Columbia, NC
Station WUNE-TV, Linville, NC
Station WUNF-TV, Asheville, NC
Station WUNG-TV, Concord, NC
Station WUNJ-TV, Wilmington, NC
Station WUNK-TV, Greenville, NC
Station WUNL-TV, Winston-Salem, NC
Station WUMN-TV, Jacksonville, NC
Station WUNP-TV, Roanoke Rapids, NC

VIRGIN ISLANDS PUBLIC TELEVISION SYSTEM
Station WTJX-TV, Charlotte Amalie, St. Thomas, VI

WESTERN NEW YORK PUBLIC BROADCASTING ASSOCIATION
Station WNED-TV, Buffalo, NY
Station WNEQ-TV, Buffalo, NY

WHYY, Inc.
Station WHYY-TV, Wilmington, DE
Station WDPB(TV), Seaford, DE