



MOTION PICTURE ASSOCIATION  
OF AMERICA, INC.  
1600 EYE STREET, NORTHWEST  
WASHINGTON, D.C. 20006  
(202) 293-1966

RECEIVED ORIGINAL  
NOV 18 1987 FILE  
Federal Communications Commission  
Office of the Secretary  
FRITZ E. ATTAWAY  
VICE PRESIDENT & COUNSEL

November 18, 1987

William J. Tricarico  
Secretary  
Office of Managing Director  
Federal Communications Commission  
1919 M Street, N. W.  
Room 222  
Washington, D.C. 20554

Re: MM Docket No. 87-268  
Television Broadcasting Services;  
Advanced Television Technology

Dear Mr. Tricarico:

Please find attached an original and five copies of  
"Comments of Motion Picture Association of America, Inc."  
in the above captioned proceeding.

If there are any questions regarding this filing, please  
contact the undersigned.

Sincerely,

FEA:vh  
Attachment  
cc By Hand:

Chairman Dennis R. Patrick  
Commissioner James H. Quello  
Commissioner Mimi Weyforth Dawson  
Commissioner Patricia Diaz Dennis  
Commissioner nominee Bradley Holmes

0+5

ORIGINAL

RECEIVED

FILE

NOV 18 1987

Federal Communications Commission  
Office of the Secretary

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

In the Matter of )  
 )  
Television Broadcasting )  
Services; )  
Advanced Television )  
Technology )

MM Docket No. 87-268

COMMENTS OF MOTION PICTURE ASSOCIATION  
OF AMERICA, INC.

Allen R. Cooper  
Vice President, Technology  
Evaluation and Planning  
Motion Picture Association  
of America, Inc.  
1600 Eye Street, N.W.  
Washington, D.C. 20006  
Telephone: (202) 293-1966

Of Counsel:

Fritz E. Attaway  
Vice President and Counsel  
Motion Picture Association  
Of America, Inc.  
1600 Eye Street, N.W.  
Washington, D.C. 20006  
Telephone: (202) 293-1966

DATE: November 18, 1987

There is general agreement that major improvements are both long overdue and technically feasible with respect to the production, distribution, transmission and reception of television, both in the United States and worldwide. The current systems -- NTSC in this and other countries contiguous with the United States, as well as in Japan and elsewhere -- and the PAL and SECAM systems (and variations thereof) in other countries, especially in Europe -- are based on technology that is at least fifty years old, modified about thirty years ago for compatible color. It is now recognized that the addition of color -- a major advance -- was accomplished only by degrading the monochrome signal with respect to picture quality, mainly the resolution of the image as seen on television receivers.

Both the desirability and the practicality of accomplishing major improvements in all aspects of television, worldwide, have led to developments which merit thorough analysis on an expedited basis. Decisions cannot be long delayed, since procrastination would probably lead to the adoption of different systems in different parts of the world, to the proliferation of de facto "standards" which would perpetuate the problems we contend with today due to the non-compatibility of NTSC, PAL and SECAM.

American producers and distributors of motion pictures and television programs have created an industry which is preeminent, worldwide. Our product is generally the most popular, most wanted programs for theaters, television and home video in all world markets. The exportation of these programs yields a favorable trade balance of over \$1 billion per year.

Our producers have generally relied on 35mm film for production, primarily because the quality of film is unmatched and unmatchable with today's video systems. Video production in the United States is largely limited to news gathering, sports, occasional documentaries, and low budget in-studio productions such as syndicated game shows.

Since the introduction of electronic video systems some thirty years ago, producers have sought to use such systems to substitute for film. It was thought that electronic cameras and videotape could produce significant savings to be derived from reducing the time involved in production and post-production. However, experience has shown that the savings, if any, were not significant, and certainly did not justify the reduction in quality vs. film. At this time, video is a poor substitute for film for theatrical presentation. Theatergoers expect and demand image and sound quality of pronounced superiority over anything they can see on today's television set screens at home.

Furthermore, a major advantage for film vs. today's video is that 35mm is acknowledged to be the world standard, because it is compatible with the projection systems in theaters throughout the world, and because 35mm prints are readily adaptable for use by all broadcasters regardless of whether they operate in an NTSC, PAL or SECAM country; at 50 or 60 Herz; with 525 or 625-line systems.

A further aspect of quality relates to the "aspect ratio," the width/height ratio of the projected image in theaters (almost 2:1), which closely approximates the natural visual field, vs. the cropped, box-like aspect ratio (1.3:1) of today's broadcast video systems.

To be sure, the U.S. production industry is using advanced electronic technology as an adjunct to film for production. Video is being used by many directors for an instant play-back of "takes" simultaneously recorded on film, and video is playing an increasingly important role in post-production operations, including editing and certain types of special effects. But by and large, the ultimate, finished product is on film.

In striving for quality, even today's film processes are undergoing study, seeking to improve the resolution of the image and eliminate (or at least reduce) some of the undesirable artifacts which are present in films. These include defects which most viewers do not even notice or have accepted for want of anything better, but are troublesome to both professional film-

makers and film-buffs. Some of these are "flicker," "strobe effect," and "granularity." Toward ameliorating these deficiencies, the industry is giving consideration toward increasing the "frames-per-second rate" from 24 to 30. (Many commercials intended for network usage are now photographed at the 30 f.p.s. rate to obtain higher quality, even when converted to videotape for broadcast.)

Our industry has observed developments with respect to "Advanced Television" and "High Definition Television" with great interest. We have been especially impressed by the NHK HDTV system, which has been demonstrated to film and television professionals in the United States, Europe, and Asia. Without question, this system does allow for the production of programming of near-film quality, virtually free of the artifacts referred to above, and in the desired aspect ratio. Our people have concluded that it is a very good system, a major technological achievement. We have seen examples of NHK/HDTV productions that are almost comparable to film. For certain applications, NHK/HDTV -- in its present state of development -- is considered by many experienced film-makers to be a practical substitute for film for program production.

We have also followed closely the enormous progress made to produce "standards converters" to work with all existing terrestrial broadcast systems. These developments have reached a point at which our industry believes that it is now or will soon

be practical to distribute videotaped television programs worldwide in the NHK/HDTV format, for local conversion to NTSC, PAL, SECAM, and the variations thereof. A single, worldwide standard for "program exchange" will greatly facilitate and produce economies for our companies vs. the complexity and cost involved in producing and shipping our programs in the form of film or multiple varieties of videotape to our broadcaster customers.

It was for these reasons that the U.S. motion picture industry has given wholehearted support to the State Department's active role in seeking approval of the 1125/60 High Definition Television System by the international bodies concerned with adopting such standards, for production and program exchange. It is already widely recognized that the NHK system is very good for these purposes, and production of programs broadcast television -- and possibly to theater -- using NHK/HDTV equipment has been initiated by producers in the United States, Canada, and Europe (as well as in Japan). It is an unchallengeable fact that the 1125/60 system is rapidly becoming a de facto "studio" standard.

However, it is not "the last word" with respect to high definition television production. In the near future, we expect to learn of further improvements, including the replacement of the scanning system, from "interlaced" to "progressive." "Progressive" (or "sequential") has been intensively studied at MIT, NYIT, by the National Broadcasting Company, and by others, and major advantages for "progressive" have been reported.

Our support for the NHK/HDTV system is currently limited to its use for production and program exchange. We are not at all convinced that this system should be or will be the choice for transmission (or, in Europe, "emission") to the public. We are concerned by the fact that the NHK/HDTV system, even with the ingenious MUSE development, cannot be viewed on today's television receivers without an adapter. And we are cognizant of the fact that the image received on television sets fitted with the MUSE adapter is somewhat degraded, and is still in the undesirable 4:3 ratio rather than the 5:3 wide-screen ratio which can only be viewed on specially designed NHK/HDTV system receivers. Further, we are very much concerned by the bandwidth requirements for even the MUSE system. For terrestrial MUSE transmission, the equivalent of two of today's video channels are needed. Such additional channels will be difficult, if not impossible, to obtain in the United States and in other countries with highly developed TV systems and where there is much competition for spectrum space in these bands.

We believe that current research under way, here and abroad, will in the foreseeable future, develop advanced terrestrial transmission systems that will be seen to be a major improvement over NTSC, PAL and SECAM, and at the same time, provide programming that will be viewable on both existing TV receivers and new generations of improved receivers. We also believe that

such systems will be more sparing than MUSE with respect to spectrum requirements, although relatively minor adjustments, e.g. relaxing the present inter-channel "taboos" may be required for optimum performance.

In our opinion, there is no unsolvable conflict between recognizing the NHK/HDTV system now as a worldwide studio production and program exchange standard and delaying a decision with respect to terrestrial broadcast systems pending further research and development, seeking a system that is not only compatible with present receivers, but one that would produce higher quality images than the current systems can provide. There are several such systems under development, including the MAC system proposed for Europe and which is now being used extensively in Australia and to a limited extent in the United States; the system under development by Professor William Glenn at the New York Institute of Technology; by NBC at the David Sarnoff Research Center, and by Philips, Bell Laboratories, Osborne, Del Ray and others throughout the world.

There is a fiercely, competitive race underway to develop a much-improved terrestrial broadcast television system. The public will benefit from this competition. But it is essential that the FCC in the United States, and equivalent governmental authorities elsewhere, do not foreclose the adoption of an advanced television system in the near future by failing to reserve spectrum space that may be needed to accommodate the chosen system.

For production and program exchange, the NHK/HDTV system should be certified as a world standard without delay. For terrestrial broadcasting, we would counsel the FCC and other agencies to give full consideration to future needs for an advanced television broadcast system by refraining from allocating spectrum space for non-broadcast applications that may be needed for a use of great importance to the general public. We therefore view the FCC's Notice of Inquiry as a most prudent first step. In behalf of our industry, MPAA and its member companies can assure the FCC our full cooperation.

Respectfully submitted,

MOTION PICTURE ASSOCIATION  
OF AMERICA, INC.

BY:

Allen R. Cooper  
Allen R. Cooper  
Vice President, Technology  
Evaluation and Planning  
Motion Picture Association  
of America, Inc.  
1600 Eye Street, N.W.  
Washington, N.W. 20006  
Telephone: (202) 293-1966

Of Counsel:

Fritz E. Attaway  
Vice President and Counsel  
Motion Picture Association  
of America, Inc.  
1600 Eye Street, N.W.  
Washington, D.C. 20006  
Telephone: (202) 293-1966

DATE: November 18, 1987