ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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

REPLY COMMENTS OF GENERAL INSTRUMENT CORPORATION

General Instrument Corporation ("GI") submits these comments in response to the Fifth Further Notice of Proposed Rulemaking ("NPRM"), FCC 96-207, released May 20, 1996. We support adoption of the ATSC digital television ("DTV") standard as the North American standard for digital over-the-air broadcast ("digital broadcast") television.

Summary of Position

The Commission should adopt the ATSC DTV standard for digital television broadcasting in the United States. A digital broadcast standard is necessary to a successful technological transition for broadcasters to digital transmission. The balance of costs and benefits warrants adopting a standard for television broadcasting, but does not warrant the extension of this standard to cable TV, MMDS, satellite television or other television distribution media.

029

We oppose efforts of the computer industry to prohibit interlace scan transmission and display of broadcast signals, in order to impose its concept of how digital broadcast systems should evolve.

The computer industry is being short-sighted in opposing the ATSC DTV standard, which is the only digital television standard that supports progressive scan. The ATSC system is locked in an international marketplace battle against another digital broadcasting system, DVB, which includes only interlace scan. The FCC's failure to adopt the ACATS specification would be likely to result in greater proliferation of the DVB system throughout the world. Where DVB is deployed, the computer industry's prospects for achieving progressive scan will be eliminated or indefinitely postponed.

Need for Adoption of a Standard

There is widespread agreement that the Commission should adopt the ATSC DTV standard, based on the Digital HDTV Grand Alliance system, as the standard for digital broadcasting in the United States. This position is supported by a joint submission of over ninety broadcasters and broadcast organizations. It is supported by equipment manufacturers including Dolby Labs, Mitsubishi Consumer Electronics, Sony Electronics, Tektronix, Thomson Consumer Electronics, Philips Electronics, Hitachi America, Matsushita Electric Co., Zenith Electronics and General Instrument Corporation. It is supported by a variety of other organizations including Advanced Broadcasting Systems of Canada, Motion Picture Association of America, Electronic Industries Association, Hammet & Edison, the Advanced Television Technology Center, the Advanced Television

Systems Committee, Citizens for HDTV, and the Advanced Television Systems Committee. In short, it is supported by virtually every entity that is in the broadcast business. Since the proposed standard is intended to be the standard for broadcasting, and solely for broadcasting, great weight should be given to those parties in the broadcasting and broadcast equipment businesses.

We note that the cable TV and computer industries have both elevated discussion about the negative effects of government mandated standards. We have ourselves raised such questions, particularly with respect to digital standards for cable transmission and for other transmission systems. In this instance, however, we believe that different considerations apply with respect to a digital broadcast standard, as we have outlined in our comments. In particular, we believe that a digital broadcast standard is necessary to a successful technological transition for broadcasters to digital transmission. Were it not for the fact that broadcast service is a universal, non-subscriber service, we would not view government intervention in the form of a government standard to be appropriate.

Whether maintenance of a universal, non-subscriber broadcast service is an appropriate objective of public policy is, we would agree, a legitimate subject of debate. However, that debate belongs not at the Commission but in the Congress. What would not be appropriate would be for the Commission to make such a determination in a "back door" fashion by depriving broadcasters of the tools needed to preserve their service, in the absence of such a Congressional change of national policy. And, in light of the current policy, we believe that the balance of costs and benefits warrants adopting a broadcast standard. See comments of GI, p. 2-3.

No such national policy supports extension of government standards beyond the broadcast system. However, instead of recognizing the negative effects which government mandated standards create, and thus recognizing the need for confining those negative effects to those circumstances where they are absolutely necessary, several parties in their comments have urged the Commission to impose the digital broadcast standard on cable companies, for example by requiring them to "pass through" broadcast signals without changing the modulation or other technical features of the signal. See comments of Zenith Electronics, p. 13; Matsushita Electric, p. 11; Circuit City, p. 7-8; Broadcasters, p. 25-32. Such a requirement would make inefficient use of the limited spectrum capacity of a cable system, by denying cable companies the ability to repack signals with a more advanced modulation method that takes advantage of the more benign propagation medium of coaxial cable compared with over-the-air broadcasting. In particular, application of government standards to rapidly evolving, new technological developments, such as those associated with digital broadband networks, is particularly unwarranted.

For this reason, we join with NCTA, TCI and Pacific Telesis and oppose any mandatory digital television standard for cable, MMDS and/or satellite.

We also believe that the Commission should adopt appropriate tools to ameliorate the negative effects of a government mandated broadcast standard, such as procedures to allow expedited modification of the standard to incorporate new technological developments.

International Trade Issues and Progressive Scan

The computer industry has evolved without, and to a large extent because of the absence of, government mandated standards. Indeed, the computer industry has become everyone's favorite example of the benefits which unregulated industries can confer on the U.S. economy and it is this history which provides the industry with a measure of credibility when it urges the Commission not to adopt the ACATS broadcast standard. That makes it particularly regrettable that the computer industry is now asking the Commission to adopt special rules for its benefit and, apparently, in order to advance its concept of how digital systems should evolve. That is the only interpretation which can be placed on the industry's insistence that the Commission go beyond facilitating progressive scan and, effectively, ban interlace scan.

We also believe that the computer industry is being short-sighted in opposing the ATSC DTV standard, on the grounds that it allows interlace as well as progressive scan transmission and displays. If the computer industry desires to see progressive scan in distribution systems, it should remain mindful that the ATSC system is the most practical path for achieving that end. The ATSC system is locked in an international marketplace battle against another digital broadcasting system, DVB. The DVB system includes only interlace scan.

Numerous parties in their comments have noted this marketplace battle. See comments of ATSC, p. 23; Citizens for HDTV, p. 17-28; Digital HDTV Grand Alliance, p. 30;, Thomson Consumer Electronics, p. 10; Philips Electronics, p. 15-17; GI, p. 8-11. But it is most eloquently described in the comments of NTIA:

> Failure to adopt a U.S. standard may mean that competing systems -- such as the Digital Video Broadcasting (DVB) system, developed by a consortium of European broadcasters, electronics companies, and telecommunications organizations -- will win the race for worldwide acceptance. 205 companies from 29 countries, including broadcasters, programmers, network operators, and manufacturers, have already signed a Memorandum of Understanding under which they agree to facilitate the introduction of services using the DVB standard. This momentum may continue to grow, and other countries may be less willing to adopt the U.S. standard, if the U.S. government itself delays or forgoes the adoption and implementation of a standard. NTIA Comments, p. 2.

DVB has already made inroads into the U.S. market itself, having been adopted by one of the DBS satellite systems.

The FCC's failure to adopt the ACATS specification would be likely to result in even greater proliferation of the DVB system throughout the world. Where DVB is deployed, the computer industry's prospects for achieving progressive scan will be eliminated or indefinitely postponed.

Conclusion

In light of these considerations, the Commission should adopt the ATSC digital television standard as the North American standard for digital over-the-air broadcast television. The public interest benefits that will flow from this decision, including faster deployment of digital television and faster retrieval of analog television spectrum, far outweigh any costs.

Respectfully submitted,

GENERAL INSTRUMENT CORPORATION

Quincy Rodgers
Vice President, Government Affairs
General Instrument Corporation
1133 21st Street, N.W.
Suite 405
Washington, D.C. 20036
202/833-9700

Robert M.Rast
Vice President, Technical Business Development
General Instrument
Communications Division
6262 Lusk Boulevard
San Diego, California 92121
609/535-2532

Jeffrey Krauss, Ph.D.
Telecommunications & Technology Policy
17 West Jefferson Street
Suite 106
Rockville, Maryland 20850
301/309-3703