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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554  
Federal Communications Commission  
Office of the Secretary

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 )  
)  
Reevaluation of the UHF Television )  
Channel and Distance Separation )  
Requirements of Part 73 )

MM Docket No. 87-268

COMMENTS OF GENERAL INSTRUMENT CORPORATION

General Instrument Corporation ("GIC") submits these comments in response to the Tentative Decision and Further Notice of Proposed Rulemaking herein ("FNOI"), FCC 88-288, released September 1, 1988. GIC's comments are limited to two areas of concern: compatibility of broadcast ATV with alternate media ATV; and use of microwave spectrum for broadcast ATV.

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### Summary of Position

The FCC should not mandate an ATV standard for alternate media; non-broadcast media should be free to take advantage of the additional bandwidth available, and market forces will assure that the proper level of compatibility between broadcast and non-broadcast media is chosen.

The use of microwave spectrum for broadcast ATV would be contrary to the public interest and no further resources should be devoted to considering this issue.

### Compatibility of Broadcast ATV with Alternate Media ATV

There is no need for the Commission to adopt an ATV format or impose compatibility requirements for alternate media. We believe that the future generation of TV sets will be designed to receive and display both broadcast ATV and alternate media ATV.

It would be contrary to the public interest to constrain cable TV and satellite broadcasters to use the same format as TV

broadcasters. The bandwidth available on cable and satellite systems may allow these media to use formats that achieve enhanced pictures compared to broadcast TV. If this should prove to be feasible, the public should be allowed to receive the benefits of these enhanced formats. The FCC should not handicap these alternative media video delivery systems by imposing on them a format designed for TV broadcasting.

We expect that the future generation of ATV receivers will be receiver/monitors. The tuner section will be designed to receive broadcast ATV signals in the format adopted by the Commission. They will also accept video in both baseband composite and component format. Today's larger, more expensive TV receivers are already designed this way. They accept baseband video and Y/C component video signals as well as RF broadcast and cable television. In addition, two brands of TV receivers are now being manufactured with the EIA IS-15 Multiport connector which has the capability to accept RGB component video. We understand that the EIA has begun work on the development of an ATV interface similar in concept to the IS-15 interface.

Some minimum level of compatibility between broadcast ATV and alternate media ATV is necessary to be sure that the alternate media RGB components and broadcast ATV RGB components

have the same characteristics. There is no need for a Commission requirement here, however, since alternate media often serve as input or relay facilities for broadcast stations. The marketplace will assure that alternate media are sufficiently compatible with broadcast ATV so that they can continue to serve as input and relay facilities for broadcast stations.

In addition, the Commission should recognize that the TV receiver marketplace depends on high production volumes to achieve low costs. The presence of economies of scale in this industry will act as a driving force to assure that the advanced TV formats chosen by TV broadcasters, cable TV operators and satellite broadcasters will be sufficiently compatible with one another to allow the design of TV receivers that can serve all formats. TV receiver manufacturers would not achieve the necessary economies of scale if they were to design specialized receivers that only worked with TV broadcasting or VCRs or laser videodisks or cable TV. Receivers must be able to work with all of the transmission media, or else consumers will not buy them.

For all these reasons, there is no need for Commission action on an ATV standard for alternate media. While the Commission considers a format for broadcast ATV, alternative media ATV formats will evolve in the marketplace that take

advantage of the specific technical advantages of each transmission medium, while retaining an appropriate level of compatibility with broadcast ATV to allow use of a single receiver.

#### Use of Microwave Spectrum for Broadcast ATV

We agree with the Commission's tentative decision to eliminate further consideration of the microwave bands for terrestrial ATV transmission.<sup>1</sup> The 4 GHz and 7 GHz government bands identified by the Advisory Committee would be both technically and operationally inappropriate for broadcast use.<sup>2</sup> The 12.2-12.7 GHz band is allocated for the Broadcast Satellite Service and should be preserved for the development of that new service. We believe that DBS systems using this band are likely to be launched in the early 1990s, during the same time period that terrestrial broadcast ATV services are being established. We see no way for the two services to share the band in any reasonable way. Moreover, the 12 GHz band is not well-suited for

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<sup>1</sup>FNOI, para. 76-80.

<sup>2</sup>On the other hand, use of these bands for studio-to-transmitter links and other relay purposes may warrant detailed consideration. FNOI, para. 97-102.

terrestrial broadcasting because of terrain blockage and atmospheric attenuation.

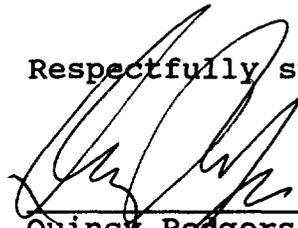
Any Commission action which were to inject additional uncertainty into the DBS service would be contrary to the public interest. We understand that the Advanced Television Test Center will undertake propagation tests of 12 GHz while it is also testing UHF propagation. While these tests are not official Commission actions, we are concerned that the mere fact of testing might give the impression that the 12 GHz band is still under consideration for terrestrial broadcast ATV use, and might thereby add uncertainty to the development of the DBS service.

#### Conclusion

GIC supports the Commission's tentative decisions to refrain from adopting advanced TV formats for alternate media and to preserve the 12.2-12.7 GHz band for the DBS service. While the Commission considers an ATV format for broadcast television, equipment manufacturers and users of alternate transmission media

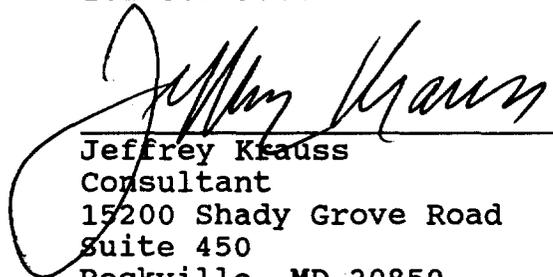
should be able to design enhanced systems that take advantage of available bandwidth while still maintaining basic levels of compatibility with broadcast television. The Commission's FNOI is a good step in that direction.

Respectfully submitted,



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