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Federal Communications Commission  
Office of the Secretary

Before the  
Federal Communications Commission  
Washington, DC 20554

In the Matter of )  
 )  
Advanced Television Systems and )  
Their Impact Upon the Existing )  
Television Broadcast Service )

MM Docket No. 87-268

**COMMENTS OF GENERAL INSTRUMENT CORPORATION**

General Instrument Corporation ("GIC") submits these comments in response to the Notice of Proposed Rulemaking ("Notice") in the above-captioned proceeding<sup>1</sup>. These comments deal only with the issues of patent licensing and compatibility (Notice, para. 46, 47.)

GIC participates in this proceeding as the proponent of two of the four digital ATV formats. GIC took the lead in ATV development in 1990 by submitting the initial proposal for an all-digital ATV format. Since that time, others have followed the lead established by GIC and have proposed additional all-digital formats. Moreover, GIC and the Massachusetts Institute of Technology have formed an affiliation, known as the American TeleVision Alliance, for the purpose of developing and submitting two all-digital ATV formats for testing by the Advanced Television Test Center. GIC has been an active participant in the activities of the Commission's Advisory Committee on Advanced Televi-

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<sup>1</sup>FCC 91-337, released November 8, 1991.

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sion Service, including its subcommittees, working parties, task forces and specialist groups.

## **SUMMARY OF POSITION**

The public will benefit from widespread licensing of ATV patents. The Commission's Advisory Committee has established a requirement that all proponents agree to license their patents on reasonable terms if chosen as the U.S. standard. In the past, patents underlying broadcast standards have been widely licensed, and we believe it will occur for Advanced Television as well. There is no need for Commission action unless the Advisory Committee's requirement can be shown to be insufficient.

The Advisory Committee has decided on a set of ten selection criteria for making its recommendation on a standard; among these ten are interoperability with alternative media and extensibility. We do not think that these two criteria are more important than the other eight. We do not believe that the Commission at this time should elevate these two in importance above the others. The Commission should allow the Advisory Committee to make its recommendation based on all ten criteria.

## **PATENT LICENSING**

The Commission is correctly concerned that patent licensing policies should not be allowed to become barriers to the development of Advanced Television service. The Commission has announced its intention to take appropriate action to prevent this.<sup>2</sup> But

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<sup>2</sup>See, for example, Amendment of Section 3.606 of the Commission's Rules and Regulations, 41 FCC 1, 41 (1950) at para. 126; Revised Patent Procedures of the Federal Communications Commission, 3 FCC 2d 26 (1961); Amendment of Part 3 of

in the past, the need to take such action has never actually arisen, and there is no reason to think that it will arise in the case of ATV.

Proponents have been required by the Commission's Advisory Committee to state that they are willing to license their patents<sup>3</sup> on reasonable terms and conditions. This is required by the Test Management Plan. Proponents have submitted (or will submit) such statements as a prerequisite to enter the testing process at the Advanced Television Test Center.

In the past, with other new broadcast services that the Commission authorized after adopting a technical standard, patents were widely licensed. The broadcast electronics industry has a tradition of widely licensing its patents. This tradition has developed largely due to economic forces. Simply put, it is more beneficial for all manufacturers when consumers have a wide variety of competing new products from which to choose.<sup>4</sup> Because of widespread marketing and availability of the new products, overall market

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(continued)

the Commission's Rules and Regulations to Permit FM Broadcast Stations to Transmit Stereophonic Programs on a Multiplex Basis, 21 RR 1605, 1615, 1616a (1961). See also, FCC patent policy memorandum from FCC Deputy Chief Engineer Bruce Franca to Irwin Dorros, Chairman of the Systems Subcommittee of the Advisory Committee on Advanced Television, April 21, 1988.

<sup>3</sup>Each of the proponent systems incorporates some proprietary technology.

<sup>4</sup>GIC does not manufacture TV receivers, and does not intend to enter that business. In this regard, GIC's role is similar to that of Dolby Labs, an enterprise that receives virtually all of its revenue by widespread licensing of its technology. Should a GIC format be chosen as a standard, GIC would have the same incentives as Dolby to license its technology as widely as possible.

penetration of the new service is enhanced.<sup>5</sup> Manufacturers sell larger quantities of their products, move down the learning curve, reduce their costs and lower their prices. Both the manufacturers and the public benefit.

In this manner, patent licensing is subject to marketplace forces. The patent licensing "market" for broadcast products has functioned in exactly the way Congress intended. It has resulted in widespread availability of new products and services, and it has stimulated innovators and inventors to invest in research and development. The Commission should not take actions that might interfere with the freedom of this marketplace unless there is a clear indication that Government intervention is necessary. There is no such indication at this time.

In our view, it is premature for the Commission to make any decision on patent licensing matters. As required by the Advisory Committee, all of the proponents have offered (or will offer) to license their patents on reasonable terms and conditions, and absent some indication to the contrary, that should be sufficient.

## **COMPATIBILITY WITH OTHER MEDIA**

The Commission has sought comment on the desirability and importance of extensibility and scalability of ATV systems, and interoperability of broadcast ATV with other transmission media and other applications. Notice at para. 47. An all-digital ATV standard will satisfy these goals.

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<sup>5</sup>Some feel that the Sony Beta format for VCRs lost out in the marketplace because it was not licensed widely enough.

GIC is proud of its ground-breaking effort in the development of all-digital ATV formats. The GIC DigiCipher system is the first of the four all-digital systems to be presented for testing. Three additional all-digital systems will follow in the testing. There is a very high likelihood that the Commission will eventually chose an all-digital system as the U.S. ATV standard.

We believe that adoption of an all-digital U.S. ATV standard is the single most important factor in assuring interoperability with other media and applications, and providing extensibility and scalability. Digital signals can be processed and modified more efficiently and reliably than analog signals in order to achieve interoperability, extensibility and scalability. There are dramatic differences between analog and digital approaches in achieving these goals, while the differences among digital formats will be highly technical in nature.

There may be tradeoffs between achieving the goals of interoperability, extensibility and scalability and achieving other important goals. We note that interoperability and extensibility are only two of the ten selection criteria that have been adopted by the Commission's Advisory Committee for use in making its recommendation on a standard.

The Commission has established its Advisory Committee to address questions of tradeoffs between selection criteria, and it is doing this. All segments of the electronics industry are participating in meetings of the Advisory Committee's subcommittees and working parties—cable TV, satellite communications, telephony, broadcast station equipment, computers, and consumer electronics. The competing formats are being analyzed by these experts in the subcommittees and working parties. In this way, the goals of inter-

operability, extensibility and scalability will be taken into account by the Advisory Committee. There is no need for explicit action by the Commission at this time.

We also note that Working Party 4 of the Systems Subcommittee has decided not to assign relative weights to the ten selection criteria. We believe that interoperability and extensibility are important criteria to be met by the ATV systems, but we are not certain that they are more important than the other eight criteria:

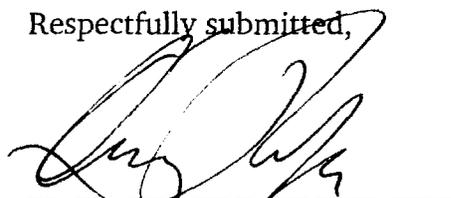
- coverage area compared to NTSC
- percentage of TV licensees that can be accommodated
- transmission robustness
- audio/video quality
- cost to consumers
- cost to broadcasters
- cost to alternative media
- scope of services and features

In light of the above, we urge the Commission to allow the Advisory Committee to make its recommendation based on a process that considers all ten criteria, including interoperability and extensibility. We do not believe the Commission should elevate one or two of these criteria to a higher level of importance, at least until the Advisory Committee has completed its work and submitted its Final Report.

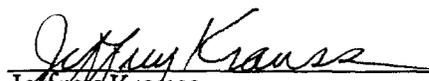
## CONCLUSION

With respect to patent licensing and interoperability matters, the Commission's Advisory Committee has anticipated the potential concerns raised in the Notice and is addressing them. Commission action on these matters now might confuse the Advisory Committee's work plan. Absent some showing that the Advisory Committee is failing to do its job, there is no need for the Commission to address these issues.

Respectfully submitted,



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Date: December 20, 1991