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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

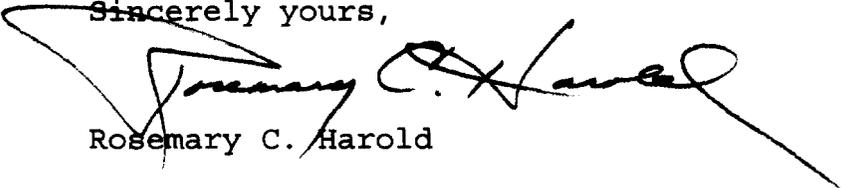
Re: Testimony of Edward D. Horowitz, Senior Vice President,
Viacom, Inc., FCC Digital Television En Banc Hearing
(MM Docket No. 87-268)

Dear Mr. Shapiro,

Per your understanding with our office, I am dispatching to you three copies of the written testimony to be presented by Mr. Horowitz on behalf of Viacom at the December 12 en banc hearing.

If any questions arise concerning the testimony, please do not hesitate to contact Paul Misener, whose direct line is (202) 828-7506, or me, at the number listed above.

Sincerely yours,


Rosemary C. Harold

cc: MM Docket No. 87-268

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**TESTIMONY OF EDWARD D. HOROWITZ
SENIOR VICE PRESIDENT, VIACOM INC.**

**BEFORE THE FEDERAL COMMUNICATIONS COMMISSION
DIGITAL TELEVISION EN BANC HEARING**

MM Docket No. 87-268

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December 12, 1995

Good afternoon. Thank you for this opportunity to testify before you and to share with you Viacom's goals for the transition to advanced television. Others today have made clear many of the critical broadcaster concerns for ATV implementation, and Viacom largely shares those concerns. We do indeed approach this proceeding as a broadcaster and a broadcast network, yet our perspective on the subject before the Commission today might best be characterized as predominantly that of a content provider.

Opportunities for Digital Content Providers

As a worldwide provider of entertainment and information content, Viacom's goal is to supply its product to every possible distribution outlet -- broadcast, cable, telcos, MMDS, direct satellite broadcasting, and onward to computers and the National Information Infrastructure. If consumers are to benefit fully from the rich array of digital content, including television and information, that these competing service providers could provide, it is imperative these consumers can gain access to our product, or whatever product they are seeking, without encountering any roadblocks thrown in their way.

Our business interests, in fact, depend upon open, competitive access for all our content -- including programming from Nickelodeon, Showtime, Paramount, Simon & Schuster, and other divisions of the company, as well as video games and other interactive services created by Viacom New Media and other Viacom companies. Indeed, Viacom seeks to provide this content to all forms of distribution and all media of delivery. And we seek to take full advantage of the opportunities digital technology affords us to provide consumers with new multimedia forms of our traditional content, as well as wholly new forms of interactive information and entertainment products.

So how can we -- and how can you, the Commission -- seek to ensure that this vision of new digital applications and abundant content can be realized and made genuinely available to all Americans?

The Threat of Gatekeepers

It is essential that FCC implementation of ATV effectively prevent the emergence of anticompetitive technological barriers that would deny consumers access to the programming of their choice and deny content providers access to consumers. Although the implementation of ATV is to be based on the publicly available Grand Alliance specifications, this is no guarantee that all content providers and consumers will have fair and equal access to digital programming. Specifically, the FCC needs to adopt safeguards against "roadblocks" that could be used to exclude programmers, to favor one programmer or one delivery method over another, or to preclude program content from reaching the consumer in the same form in which the content reached the service provider.

As I shall describe further, such roadblocks can be erected at either of two basic points:

- (1) the point at which programming enters the distribution pipeline and may be bundled by a service provider into a multichannel package; or
- (2) the point at which the programming is processed, exits the distribution pipeline, and is prepared for display.

The essential tool for erecting these roadblocks would be the set-top box or, alternatively, functionally equivalent components of digital ATV receivers. While serving as a potentially significant transitional mechanism in the implementation of ATV, set-top boxes (or their functional equivalent) could indeed be developed in a way that causes anticompetitive bottlenecks in the distribution of programming.

Anticompetitive Use of the Set-top Box

We envision two essential roles that set-top boxes may play in ATV implementation -- and thus two basic scenarios posing potential problems. In either scenario, if only one company has the key -- whether technological or practical -- necessary to interface with the distribution pipeline or gain access to the set-top box, that company could become the gatekeeper between programmers and the consumer.

In the first scenario, set-top boxes used for conversion and display of ATV broadcast signals on analog NTSC TV sets could become bottlenecks if one group of broadcasters were to adopt, for example, a proprietary access or encryption standard and then effectively foreclose other broadcasters in the area from reaching viewers. For

instance, program distributors controlling a plurality of ATV signals in a market could induce consumers to use a set-top box that receives only signals which that distributor programs or otherwise authorizes. Once a sufficient number of such boxes are deployed in consumer homes in a given market, the bottleneck will have been established: having purchased one box, consumers would be much less likely to purchase a second box. This situation could prove particularly problematic because many consumers are likely to purchase these set-top boxes to extend the useful life of their analog receivers.

In the second scenario, set-top boxes used for conditional access to digital media (whether cable, DBS, or broadcasting) displayed on an ATV receiver also could create bottlenecks if one service provider (*e.g.*, a cable operator, telephone company, or computer company) employed technology that failed to provide for the effective, nondegraded display of the programming of another service provider or unaffiliated programmer (*e.g.*, local broadcasters). Further, as in our first scenario, a group of broadcasters also could adopt a proprietary access or encryption standard and then foreclose other broadcasters in the area from reaching viewers through boxes atop ATV receivers.

Set-top boxes that are capable of passing only certain transmission protocols or that accept only a single proprietary conditional access technology could force consumers to either accept artificial limits on their viewing choices or face the unreasonable necessity of paying for multiple set-top boxes. Indeed, a need for multiple set-top boxes to receive all available programming will create consumer confusion and hesitation in adopting ATV. Multiple, proprietary standards and non-interoperable boxes would slow the penetration of digital receiving equipment and lengthen the transition to ATV.

The inhibiting effect of incompatible standards was well demonstrated when the competition between Beta and VHS video cassette recorders slowed VCR penetration. In contrast, the examples are many -- for instance, the NTSC television standard -- where open standards have accelerated technology deployment.

Ensuring Open Standards and Access

Viacom believes that there are solutions to these potential interoperability problems posed by the use of set-top boxes. The FCC should create safeguards against anticompetitive bottlenecks by requiring the adoption of open standards (including conditional access and encryption standards), while looking to industry groups to take the lead in the development and adoption of the actual standards. The role of the FCC should be to establish a framework so that the industry is permitted and encouraged to work together to develop the standard.

Our call for open standards is not meant to suggest that programmers be provided a free ride. Clearly, developers and creators of new hardware must be rewarded for their efforts through fair and reasonable licensing fees or other appropriate mechanisms. But their reward should not be a stranglehold on consumer access to programming.

In this proceeding, the Commission already has required that the technology selected for ATV broadcasting would be predicated upon "the proponent's commitment to reasonable and nondiscriminatory licensing of relevant patents." Viacom believes that this current policy should apply equally to the standards used in set-top boxes because of their potentially significant role in ATV implementation.

Likewise, to ensure physical interoperability, the Commission should safeguard against non-standard physical interfaces for external connection (e.g., a jack) to an antenna or cable feed. Consumers would be well served by the availability of a completely interoperable set-top box, capable of inputting all of their sources of information and entertainment programming or data. Thus, no service provider should be allowed to frustrate broadcasters and viewers alike by rolling out a set-top box that will not translate terrestrially transmitted ATV signals. Conversely, boxes deployed by or for broadcasters should be able to pass through the signals of other service providers. Indeed, to be truly user-friendly, the ATV set-top box should be able to connect as well with the home computer that provides access to the Internet and various on-line services. This will allow consumers maximum access to digital information, free of the artificial need for multiple boxes.

In short, if the new cornucopia of information, data, and entertainment is to move smoothly along the electronic superhighway, that path must be free of artificial, anti-competitive barriers -- technological or otherwise. Creators of program content need to know the appropriate formats and standards so that their products are compatible with existing technology, including any set-top box consumers might employ in the course of the implementation of ATV. Without FCC assurance of interoperability, a formidable gate could stand between the providers of digital content and the American consumer they seek to serve -- and the gate might open only for a few.