ORIGINAL

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

In the Matter of	)	
	)	
Telecommunications Services Inside Wiring	)	CS Docket No. 95-184
	)	
	)	
Customer Premises Equipment	)	
	)	

REPLY COMMENTS OF GENERAL INSTRUMENT CORPORATION

General Instrument Corporation ("GI") submits these reply comments in the above-captioned proceeding. There is broad agreement that signal leakage is a serious issue that requires FCC regulation and oversight. And there is also a substantial body of opinion that the Commission's common carrier rules that apply to telephone equipment (Part 68 and Section 64.702) should not apply to cable equipment. Finally, those comments that dealt with Section 304 of the 1996 Telecommunications Act demonstrate the extent to which ambiguities in that provision foreshadow disputes about how it can and should be administered and underscore the inappropriateness of dealing with these issues in this proceeding.

Signal Leakage

Virtually all parties agreed that signal leakage from broadband networks could create serious interference problems and even safety hazards. There was recognition that the leakage problems could be exacerbated because consumers might well purchase poorly shielded cable at retail. See Comments of US West at p. 9 (describing experience with installation of coaxial cable that did not meet leakage standards); Comments of Time Warner at p. 35 (use of inferior wiring could become even more of a problem in the

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future).

In light of the current retail availability of poorly shielded cable, GI proposed that the Commission should adopt the SCTE cable shielding performance specification (SCTE IPS-SP-001a) as a requirement. There was broad agreement that cable shielding specifications were needed. See Comments of Telecommunications Industry Association at p. 4 (leakage hazards can be diminished through minimum cable performance specifications); Comments of Building Industry Consulting Service International at p. 4; Comments of NYNEX at p. 18 (manufacturers and installers of cable wiring should comply with leakage limits).

We note that Tandy Corp., arguably the largest retail supplier of coaxial cable, agreed that the FCC "could address such [leakage] concerns through mandatory labeling requirements and installation instructions for broadband wiring and connectors." Comments of Tandy Corp. at p. 5. After agreement on a performance standard, cable that is adequately shielded for cable TV could carry a consumer protection label "intended for use with cable TV" and poorly shielded cable, such as that intended for non-cable TV applications, should carry the label "not for use with cable TV." (There is precedent for such a labeling requirement; *e.g.*, 47 C.F.R. 15.119(m)(requiring TV manufacturers to include advisory label on TVs regarding the absence of certain closed captioning features)).

Applicability of Telephone Equipment Rules to Cable Equipment

GI opposed application of the FCC's telephone equipment rules to cable equipment on several grounds. First, in the recently-enacted Telecommunications Act of 1996, Congress prohibited the FCC from applying such rules to Open Video Systems, and to apply such rules to other broadband video networks runs counter to the Commission's harmonization goals. Second, the FCC's telephone CPE rules do not apply to network transmission equipment, even if located on customer premises, and cable set top boxes contain network transmission functions. Third, the technical differences between telephone equipment and cable equipment justify different treatment of telco and cable equipment. Fourth, the Part 68 rules are difficult to amend and arguably have delayed or constrained innovation. Fifth, the Section 64.702 network disclosure requirements would degrade security in a cable network. Sixth, Part 68-like standardization would be difficult to achieve since virtually all cable boxes employ proprietary technology, and the Commission lacks the authority to impose a compulsory licensing regime. Finally,

regarding network connections, the industry has already agreed on a standard connector and channel plan, obviating the need for additional FCC regulation in these areas.

The preponderance of the comments in this proceeding opposed the proposal to apply the FCC's Part 68 and Section 64.702 telephone equipment rules to cable equipment.[1]

Particular weight should be given to telephone industry comments, since the telephone companies have the most experience in this area. Such a regulatory program was opposed by Ameritech at p. 16, GTE at p. 23 (technical characteristics of cable systems do not allow cable equipment to be treated identically to telephone CPE); NYNEX at p. 18 (under Part 68 it is cumbersome to introduce new technology); Pacific Bell at p. 11 (over-regulation could squelch innovation); Telecommunications Industry Association at p. 8; and US Telephone Association at p. 7 (development of telephone equipment rules was a "long and arduous task" and applicability to cable equipment is "totally impractical").

Other parties that opposed a telephone equipment regulatory regime include the Building Industry Consulting Service International at p. 8; Cable Telecommunications Association at p. 11 ("regulation in this area is unnecessary"); Cox Cable at p. 33; DirecTV at p. 14 ("DirecTV does not support the establishment of regulations concerning CPE"); National Cable Television Association at p. 29-35; and Time Warner at pp. 32, 45-48.

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[1] A few parties did support such a requirement. See Comments of Compaq Computer Corp. at p. 12 Comments of Independent Data Communications Manufacturers Association at p. 15; Comments of AT&T at p. 19 (supporting FCC regulation of connecting jacks). The Consumer Electronics Manufacturers Association ("CEMA") supported a Part 68 regime only for narrowband video transmissions, but recognized that the Part 68 rules would have to be "modified to prevent signal theft." Comments of CEMA at p. 13.

Compaq claims that the Commission's "Verilink LBO Order" stands for the proposition that ALL telephony equipment located on a customer's premises constitutes CPE. See Comments of Compaq Computer Corp. at footnote 16. That is simply wrong, since the Commission has held that both two-way satellite earth stations and DTS transmitters are network transmission equipment, not CPE. See Comments of GI at pp. 12-15. Moreover, a review of the Verilink decision shows that it deals with the very narrow issue of signal levels at a customer premises. However, cable signal levels are already regulated under Sections 15.115 (out of the cable converter) and 76.605 (into the cable converter) while telephone signal levels are unregulated; consequently, the Verilink controversy is totally inapplicable to cable TV networks.

Some parties mistakenly believe that a telephone equipment regulatory regime is needed to assure "unbundling" of cable equipment. See, for example, Comments of Compaq Computer at p. 19, citing Section 64.702(e) as the "Commission's CPE unbundling rule." But bundling refers to rates, not to the technology rules contained in Part 68 and the technology disclosure requirements of Section 64.702. The term "unbundling" as it is normally used means that rates for equipment would be shown as a separate item in the customer's bill as opposed to being combined with the service rates. But under the 1992 Cable Act and Section 76.923 of the Commission's Rules, cable equipment rates are already unbundled from service and installation rates. There is no need to adopt a plethora of new technology rules to accomplish such unbundling.

Moreover, Compaq improperly describes the physical integration of security/network and non-security/non-network elements in a cable box as "bundling." See Comments of Compaq Computer at p. 13. See also Comments of Circuit City Stores at p. 3 ("Any device used to access any services of multichannel video program distributors must be subject to competitive, unbundled manufacture and sale.") This is not "bundling" as the term is used in the context of rate regulation. Regardless of what it is called, however, even if a physical separation between security/network and non-security/non-network elements is needed for boxes that are sold at retail, there is no such need or legal basis for preventing cable operators from supplying integrated cable boxes containing security, network, non-security and non-network elements.

Indeed, the Commission has recently decided this issue:

> "...we see no need to preclude cable operators from also incorporating signal access control functions in multi-function component devices....Our decision insures that subscribers will have several competitive alternatives...."[2]

[2] *Memorandum Opinion & Order, In the Matter of Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992*; ET Docket No. 93-7; Adopted March 22, 1996; Released April 10, 1996; para. 38 (*"Equipment Compatibility Reconsideration Order"*).

Section 304 of the 1996 Telecommunications Act

We note that some parties have gone beyond the Notice of Proposed Rulemaking and have dedicated their comments to Section 304 of the 1996 Telecommunications Act and its implications. In particular, the Comments of Circuit City Stores, Inc. ("CC") address a number of issues that are properly the subject of the anticipated Notice of Proposed Rulemaking for Section 304 implementation.

We would expect that these issues will receive a full airing in that proceeding. However, it is both necessary and appropriate to address at least some of them in response to the CC comments. Although it is to be expected that CC would seek an expansive reading of Section 304, some of the assertions it has advanced in its comments in this proceeding are so extreme and so incorrect that they cannot remain unchallenged, even as we await the appropriate NPRM.

Section 304 Cannot Be Read to Sweep All Current Vendor Relationships into the Category of "Affiliate"

Circuit City asserts (p. 5) that the statutory requirement that equipment be available from "manufacturers ... not affiliated with any multichannel video programming distributor" means that equipment must be available from manufacturers other than those supplying equipment to cable operators. This is a gross misunderstanding of the meaning of affiliation. Although CC sells Toshiba television sets, that does not make Toshiba its affiliate. Affiliation requires an "attributable interest" (for example, as used in Section 76.1000 of the Commission's Rules) and is in no way triggered by the mere arms length transactions that characterize the purchase of equipment by cable television operators from vendors.[3]

It is By No Means Clear that the Decoder Interface is the Proper Interface to Support Commercial Availability of Analog Cable Boxes

The decoder interface (EIA IS-105) now being negotiated by the consumer electronics and cable industries, pursuant to ET Docket No. 93-7, was designed to allow decoder modules to connect directly to TVs and VCRs. But, contrary to CC's assertion (p. 8) that this interface is appropriate to support retail availability of cable boxes, it was not designed for this purpose. In addition to questions about its adequacy for such purpose, there are also questions as to whether it would impose unnecessary costs on consumers by duplicating functions. The Commission has indicated that it may explore such

[3] *See, e.g.,* 1996 Act, Sec. 3(a)(2) ("affiliation" requires a 10% equity interest).

questions in a future proceeding.[4] We think this is an appropriate recognition that many important issues remain unsolved.

The Appropriate Security Interface for Digital Networks Is Far From Settled

CC asserts (p. 10) that the EIA/NCTA National Renewable Security System (NRSS) defines the appropriate interface to support retail availability of digital cable boxes. But the NRSS is still a work in progress and only the first phase, addressing the physical size and shape and 8-contact connector of the ISO Smart Card, appears to be nearing completion. Furthermore, the ISO smart card approach is increasingly being criticized and opposed for being too limiting with respect to both security and functionality issues. Additional work is needed to define an interface with more contacts, based on the PCMCIA computer card. Circuit City's characterization of NRSS as a "software carrier" is totally wrong. Software-based security is not adequate for video distribution; only hardware provides the required combination of speed and security needed for video distribution.

Section 304 Looks to Industry, Not the Commission, to Set Standards

Contrary to Circuit City's interpretation (p. 19), we believe that Section 304 envisions that industry standards bodies will determine what standards are needed, if any, and they, not the Commission, will develop the needed standards. Circuit City calls for a range of mandatory FCC standards, including analog and digital security standards, digital transmission standards and cable modem standards. This attempt to embroil the Commission in a series of highly complicated, technical standards-setting activities is truly astounding, particularly in light of Congressional recognition that such standards have a rigid, stifling effect (GI Comments, p. 10).

Conclusion

The Commission must recognize, as the preponderance of comments maintain, the fundamental differences between, on the one hand, cable television systems and advanced broadband systems and, on the other, the current telephone network. These differences make it inappropriate for the Commission to apply Part 68 and *Computer Inquiry* rules and regulations to cable television and advanced broadband systems. Issues raised by Section 304 of the 1996 Act are not appropriate to this proceeding; this proceeding is not appropriate to resolution of issues raised by that section.

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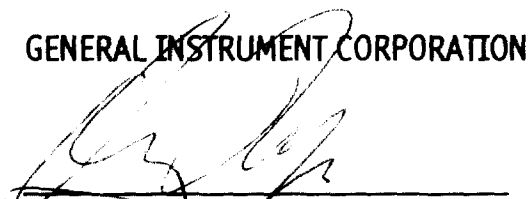
[4] *Equipment Compatibility Reconsideration Order,* p. 39.

The inside wiring aspects of this proceeding do raise an issue which the Commission can and should address through protection of consumers and others from hazards and interference caused by signal leakage. GI urges the Commission to adopt the SCTE cable shielding performance specifications and to require appropriate labeling for cable home wiring sold at retail.

Respectfully submitted,

GENERAL INSTRUMENT CORPORATION



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