

DOCKET FILE COPY ORIGINAL

RECEIVED

JUN 23 1997

Federal Communications Commission  
Office of Secretary

Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of Section 304 of the Telecommunications Act of 1996	)	CS Docket No. 97-80
	)	
Commercial Availability of Navigation Devices	)	

**Reply Comments of Telecommunications Industry Association**

The Telecommunications Industry Association (TIA) is a national trade association whose membership includes over 625 manufacturers and suppliers of all types of telecommunications equipment and related products and services. TIA's members collectively provide the bulk of the physical plant and associated equipment and software used to support and improve the nation's telecommunications infrastructure. TIA filed comments in the initial round of this proceeding.

**Summary**

The initial comments included general agreement on two main themes: (1) the desirability of the retail option for set-tops, cable modems and other devices; and (2) the need for voluntary rather than mandatory or government standards. The cable industry, its current suppliers and potential new entrants to the market support the goal of retail availability and recognize the importance of providing consumers with product choices and the freedom to purchase their own devices.

No. of Copies rec'd  
List A B C D E

021

The challenge the Commission and industry jointly faces is how best to implement the goal. Generally, U.S. policy favors the use of market forces rather than regulation as rapid changes in technology and services can be brought to consumers in a more timely manner.<sup>1</sup> As noted in our opening comments, TIA favors a market approach. However, one area where there is widespread industry agreement that Commission action can facilitate commercial availability is the “right-to-attach”. Therefore, TIA recommends that the Commission focus its efforts on developing the details of a “right-to-attach” mechanism.

### **I. Right-to-Attach**

As we discussed in our opening comments, TIA supports the Commission’s tentative conclusion that the “right-to-attach” is a core prerequisite for implementing retail availability of set-top boxes and related navigation equipment. Most commenters in this proceeding – including the National Cable Television Association (NCTA), Multichannel Video Programming Distributors (MVPD)s and media and computer companies – generally support consumer choice as an appropriate Commission objective under Section 629. In response to this widespread agreement, the Commission should focus its efforts toward defining a consumer’s right to attach navigation devices to MVPD networks.

The telecommunications industry provides a good example of the benefits consumers enjoy when equipment can be purchased through a variety a sources and be interconnected virtually anywhere. Although the substantial variations among MVPD networks, and the differences between telephone and MVPD networks pointed out by

---

<sup>1</sup> For example, computer hardware is available to consumers from a number of manufacturers and retail outlets despite the lack of any regulatory requirements or mandated standards. In fact, the computer industry has long advocated marketplace forces rather than regulatory control for its products.

many commenters make direct applications of the telephone model to Section 629 impractical, many of these same pro-consumer and pro-competitive results may be obtained for multichannel video navigation devices. Over the long term, a right-to-attach will allow market forces to create consumer demand, facilitating technical developments that will overcome the current widespread incompatibilities among navigation devices used to access MVPD transmission systems.

Consumers should have a right-to-attach their own navigation devices to an MVPD's network, provided that the equipment does not adversely affect the network. The right of the consumer to attach must not preclude the ability of network service providers to ensure that no harm is done to their networks, to prevent the degradation of services provided to customers, and that security of the network is maintained. TIA believes that the MVPD industry is moving towards development of voluntary, consensus technical standards for network protection in the digital environment. The Commission should therefore encourage, but not mandate, adoption by MVPDs and equipment manufacturers of voluntary industry standards, developed in an open, balanced environment by American National Standards Institute (ANSI) accredited organizations like TIA, that would allow a common approach to network design and interfaces. As noted in our discussion of digital standards, there are a variety of evolving specifications for digital navigation devices that appear to be moving to a situation in which industry itself can formulate ways to allow video navigation devices to be used with different types of transmission media (e.g. cable and satellite) and different classes of MVPDs, as well as among providers using similar transmission media (e.g. cable TV) in different geographic markets.

The extent to which these objectives can be achieved is a complex question of technology, network engineering and product design that should be resolved by the marketplace, not the Commission. A consumer's right-to-attach will provide all parties with the incentive to resolve these issues rapidly and meet whatever marketplace demands evolve for interoperable navigation devices.

## **II. The Importance of Voluntary Standards.**

Standards are crucial in telecommunications, particularly for functions involving communications and interconnection. In the initial comments, there was widespread agreement that commercial availability standards should be industry developed and implemented as opposed to being required by the government. It is critical that standards be developed as part of a voluntary and open process. It is also important to realize that most often, what is generally referred to as a "standard" may in fact include a suite of standards or specifications of a very detailed technical nature. A given standards effort may involve both developing new specifications and integrating any applicable existing standards. Development of such a suite of standards may therefore ultimately involve multiple standards groups and processes.

A number of groups already exist which have procedures in place to assure a fair and open process. In particular, the Telecommunications Industry Association is accredited by the American National Standards Institute (ANSI) to develop many standards in the telecommunications arena. The Institute of Electrical and Electronics Engineers (IEEE) Committee 802.14 and Cable Labs' Multimedia Cable Network Systems (MCNS) are also involved in developing specifications applicable to this proceeding.

A number of informal standards groups such as the ATM Forum, Motion Picture Engineering Group (MPEG), W3C and Digital Audio Visual Council (DAVIC) also exist and currently are engaged in standards which could be applicable to the converging video and multimedia market. Such informal standards groups have been established to, in part, streamline the process and accelerate the availability of equipment for the market. These informal groups may ultimately introduce their work into accredited standards bodies. Finally, de facto standards can also be created upon marketplace acceptance of a particular product or solution.

Standards play an important role for a number of reasons. Standards can help broaden markets, create economies of scale for manufacturing, lower costs to consumers, stimulate the competitive availability of equipment, and help ensure that multiple manufacturers have the option to participate in the market. In addition, efforts to develop such standards provide an open forum for a wide variety of technical input and help identify intellectual property rights (IPR). Generally, owners of essential intellectual property rights incorporated into accredited standards must agree to license them on a fair, reasonable and nondiscriminatory basis. The specifications and details of resulting standards are also generally publicly available to all interested parties.

The technical complexity and number of standards for the nascent digital domain makes government involvement in this process problematic and potentially disruptive to the market. Furthermore, these standards are contained in widely available public documents and network interface specifications without government involvement.<sup>2</sup>

---

<sup>2</sup> For example, the systems aspects of the Generic Coding Moving Pictures and Associated Audio is available as ISO/IEC 13818-1 International Standard (1994) and is known as MPEG-2 Systems. The video aspects of the General Coding of Moving Pictures and Associated Audio is available as ISO/IEC

In an appendix to its filing, General Instrument cited most of these standards and a number of other standards which it is utilizing in its products, including QPSK Modulation and Forward Error Correction (ITU-R Draft Recommendation [11/38] system C); and various DVB standards. General Instrument maintains that it is only in the area of access control that proprietary devices or intellectual property are necessary in order to maximize system security.

Given the widespread availability of these materials and standards, it is difficult to understand what is meant by statements such as:

“no competitive market in CPE will be possible unless CPE manufacturers are granted sufficient access to specifications and standards necessary to ensure the interconnection and interoperation of commercially available navigation devices with MVPD networks. The Commission must ensure that multichannel video services providers publicly disclosure information about the physical and logical interfaces of their systems in a way that allows ‘plug and play’ of CPE, if a competitive market for such video CPE is to be realized.”<sup>3</sup>

TIA agrees that manufacturers will need information on interface specifications. However, given the existing processes in which standards bodies make such specifications publicly available, it is not at all clear that any Commission action in this regard is necessary to ensure a competitive market.

---

13818-2 International standard (1994) and is known as MPEG-2 Video. The audio aspects of the Generic Coding of Moving Pictures and Associated audio are available as ISO/IEC 11172-3 International standard (1995) and is known as MPEG-1 Audio. The DAVIC or Digital Audio Visual Council 1.1 standard runs to well over 1,000 pages and includes lower layer protocols and physical interfaces and is known as DAVIC 1.1. For identification cards - integrated circuit cards with contacts is available as ISO 7816-1 (IS) July 1987 for physical characteristics; ISO 7816-2 (IS) May 1988 for dimensions and location of the contacts; and ISO7816-3 (IS) September 1989 for electronic signals and transmission protocols. The Data Encryption Standard or DES is available as NIST FIPS PUB 46-2 (January 1988) and DES Modes of Operation as NIST FIPS PUB 81 (December 1980). Security requirements for cryptographic modules, U.S. Department of Commerce is available as FIPS PUB 140-1 (January 1994). ATSC System Information is available as ATSC Standard A/56 (1996). ATSC Digital Audio Compression (AC-3) is available as ATSC Standard A/52 (1995). ITU QAM Modulation and Forward Error Correction is available as ITU J.83 Annex B.

<sup>3</sup> See comments of Consumer Electronics Manufacturers page 13.

TIA recognizes that the digital standards required to support portability and interoperability are in their infancy and operators may choose differing standards to meet their customer requirements. That is the market at work and government intervention could unintentionally limit rather than maximize service options consumers will ultimately have available. In particular, TIA believes that it is premature for the Commission to become involved in standards, particularly for digital standards for MVPD systems.

In general, comments of the consumer electronics manufacturers, retailers, computer manufacturers and software industry do not directly address the fairly extensive and open standards developed by the cable industry. Instead, for example, they insist on concepts such as national portability.<sup>4</sup> In fact, cable industry standards for digital devices do provide for portability and interoperability. These standards, however, are not yet complete, because the range and specifics of the services which are to be provided are not yet known.

As the Commission recognizes, the Telecommunications Act of 1996 provides the framework under which cable, long distance and local exchange providers may all ultimately compete in providing various services. It is also clear that sufficient time has not elapsed since passage of the Act and development of follow-up regulations for cable companies and others to finalize their business plans responsive to these new opportunities. It would be particularly unproductive to develop standards merely for the sake of standards and in a vacuum without fully considering how those standards assist operators in ultimately bringing these new and competitive services to the public.

---

<sup>4</sup> See comments of Circuit City Stores, Inc., pp. 4-5.

### **III. Additional Issues**

In addition, TIA makes the following observations and recommendations upon reviewing initial comments submitted in its proceeding.

#### **a. Analog Devices**

With respect to analog devices, there is general agreement, with some limited exceptions, that it is very late in the game to regulate these devices for retail availability and that any such regulation would be costly or unlikely to work. For example, applying any new regulation retroactively to the imbedded base of analog products already deployed to support that current 65 million cable subscriber households would be extremely impractical, costly and disruptive to the market.

In a related matter, the Commission has a long-standing proceeding (Docket 93-7) to address decode interface specifications for analog products. It is unclear from this proceeding and comments in the cable television and consumer electronics compatibility proceeding whether there is any real demand for a decoder interface device given the current market solutions for most compatibility problems. This market uncertainty now faced by manufacturers interested in producing such devices suggests that any Commission action requiring such a specification for analog products could be unnecessary at best.

#### **b. Separation of Security and the National Renewable Security System**

Several parties raised the issues of separation of security and the National Renewable Security System or NRSS. NRSS is a proposed digital set-top box security standard being developed by the cable television and consumer electronics Joint Engineering Committee of the Consumer Electronics Manufacturers Association and the

National Cable Television Association. Separation of security by using the NRSS or other methods may help facilitate the commercial or retail availability of navigation devices. However, TIA notes that some of the initial efforts to separate out security in other MVPD services were less than successful, resulting in theft of service, both in Europe and the United States.

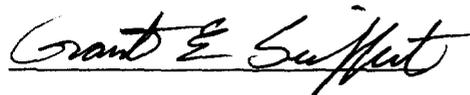
TIA believes that any requirement to use the NRSS at this time would be premature. In particular, the standard is still under development. A number of technology issues have been raised and are still being finalized and the NRSS is yet to be tested and proven in the market. While the NRSS is based on a smart card concept, it is not compatible with the smart card systems normally in use today. There are two options for implementing the NRSS standard: part of option A requiring a card; and option B providing for a module and a card in the event of security breaches. Option A provides for a card insert, but the physical specification of the card is both longer and fatter than smart cards in use today and has sometimes been called Fat ISO. The module for implementation of option B incorporates a 68 pin connector patterned after a PCMCIA card. It is not a standard in the traditional sense, but rather allows the marketplace to fill in various aspects of the card or device.

While both the A and B specification of the NRSS provide options for facilitating the commercial or retail availability of devices, they are largely untested in the marketplace. For example, the 68 pin connector for option B is a relatively expensive component for the consumer electronics market and this could impact efforts to bring affordable products to consumers.

#### **IV. Conclusion**

In conclusion, TIA believes there is substantial industry agreement that a “right-to-attach” regulation, properly crafted, could facilitate the commercial availability of MVPD navigation devices without significant negative intrusion into the market. TIA continues to believe that industry development and implementation of standards is far more beneficial to consumers overall than government mandates. Further, significant progress is already underway to define standards that assist operators in taking advantage of the new competitive opportunities provided by the Telecom Act of 1996. That work understandably cannot be finalized, pending identification of the services and content that such products must help deliver to consumers. Therefore, TIA recommends the Commission focus its efforts on developing a practical “right-to-attach” rule, leaving standards setting to voluntary industry bodies.

Respectfully submitted,



Grant E. Seiffert  
Director of Government Relations  
**Telecommunications Industry Association**  
1201 Pennsylvania Ave., N.W., Suite 315  
Washington, D.C. 20004-2401  
Phone: (202) 383-1483

June 23, 1997