Before the

Federal Communications Commission

Washington, DC 20554

In the Matter of	)	
	)	
	)	**PP Docket No. 92-234**
Inquiry into Encryption Technology for Satellite Cable Programming	)	

COMMENTS OF THE SATELLITE BROADCASTING AND COMMUNICATIONS ASSOCIATION OF AMERICA

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I. INTRODUCTION

The Satellite Broadcasting and Communications Association of America (SBCA) is pleased to submit to the Commission its comments on this important proceeding. While SBCA's comments will be limited to a discussion of standards for encryption and compression and the Government's role therein as raised in the Notice of Inquiry, the Commission is to be commended as a general matter for initiating this NOI.

The SBCA is the national trade organization which represents the home satellite broadcasting industry. In addition to the satellite operators, programmers, equipment manufacturers, retailers and distributors who are members of the Association, encryption companies also play a major role in SBCA activities. We are not providing comments on the many competitive aspects which this NOI raises. Those are best left to the industry participants who have a direct stake in the utilization of encryption technology either as programmers who desire to control and protect their signals, or as manufacturers of decoding equipment for sale to satellite consumers.

The role of the SBCA in this proceeding will be to comment on a very specific portion of the NOI which has a commonality with all of the diverse components which make up the satellite industry today. The matter in question relates to the compatibility of various satellite video services in an era when the industry is witnessing a veritable explosion in the development of new transmission techniques and technologies. It is an era during which the Commission seeks a "smooth transition from analog to digital transmissions" (para. 24), perhaps resulting in a "standard decoder interface" (para. 25). We will first address briefly the two singular issues raised in the context of technological compatibility among differing systems, followed by the more specific question of decoder interface.

II. DEVELOPMENTS IN THE SATELLITE MARKET PLACE

The satellite industry is currently undergoing some very fundamental and rapid changes in the delivery of video signals to home consumers. First is the historical changeover by General Instrument Corporation from the former VCII decryption technology to the newer VCII Plus/VCRS. We will not take the time to discuss here the causes for the changeover because they are well known to the Commission. It is important to note, however, that the conversion to the new decoders has been an unparalleled success in terms of the apparent consumer satisfaction which has accompanied it. As a result, in 1992 alone the number of legitimate subscribers to satellite programming has leaped from approximately 450,000 at the beginning of the

year to 1 million at the present time.

Concurrent with the growth in subscribership has been an increase in the shipping of new HSD systems into the market place at a rate not experienced in over four years. We estimate this growth is due to several factors: a) The increasing attractiveness of satellite as a video medium, in view of the successful conversion to a more secure decryption technology and the elimination of consumer confusion and uncertainty; b) The overall quality of both satellite video and audio, unmatched by any other medium; c) New interest in C-band, initially sparked by the advent of smaller dishes for the Galaxy V satellite; and d) Increased attention for the satellite industry in general as a result of the recent public focus on cable television. Taken as a whole, these market place conditions constitute the engine driving the growth of satellite systems at a significant rate.

The current environment is enabling HSD to increase its desirability within the television viewing base and to sustain a vibrant and resilient competitive quality attracting new investors and stimulating increased professional management within the industry proper. Thus the Commission's willingness to explore encryption and compression technologies is timely in view of the larger developments which are taking place in the satellite industry. Within this setting, SBCA will now address the technology compatibility issues raised in the NOI.

III. NEW TECHNOLOGY FOR SOFTWARE DELIVERY

Hand in hand with the continuous success of satellite program delivery has been a spate of new advancements in technological development, both in the area of video delivery as well as encryption. We have already stated above the essential role the new VCII Plus/VCRS decryption system has played in stabilizing the HSD industry. Its current growth is a reflection of the certainty in the market place which has been created by the changeover to a more secure decoding technology. In the same vein, the growth which is the result of market place stability is also making the HSD industry an attractive environment for introducing new technological advances to enhance this important video delivery medium. Thus, the Commission has correctly labelled the current era as a "significant transition period during which a wide range of incompatible satellite (and other) video services will be offered." The questions the NOI has raised concerning compatibility, flexibility and consumer "friendliness" are logical and appropriate.

Encryption in the Market Place

The Commission suggests in the NOI that a "standard decoder interface" may serve to accommodate multiple decryption technologies in the same consumer receiving equipment. The NOI asks whether "market forces are likely to produce it" in the event

it is proven an efficient technique. SBCA concurs in the concept of allowing market forces to decide how to accommodate multiple technologies as the correct approach to this problem. By the same token, we also believe that there is an important and necessary role for the FCC to play in monitoring the development and assimilation of new encryption technologies and video transmission systems with a view toward overseeing the growth of a "rational market place."

We note here historically that the satellite industry adopted the General Instrument VCII as the de facto decryption standard. The industry was fortunate to have had only a single decoder standard when the time came to eradicate satellite signal theft. In that regard, and in view of the then state of the HSD market place, the industry could not have tolerated the existence of multiple decoders, nor could they have been changed out in a smooth transition. The process of changing out VCII units - both legal and illegal - was vastly simplified because of the existence of a ubiquitous de facto standard. As we stated above, the ensuing market place stability has now made the HSD industry an attractive arena for the introduction of newer systems because of the very nature of satellite as a highly technologically oriented video delivery medium. It is important to reinforce at this juncture the fact that the advances in encryption security were accomplished by private entrepreneurship and not by government-mandated standard. Market forces drove encryption upgrade, lest the vast potential of a satellite viewing base for the future be lost.

The history of consumer television and electronics, however, is replete with incompatibility whether it be in audio recording, TV channel compatibility or VCR formats. But for the most part, the design which has survived was that considered in the consumer's judgement to be the most efficient. Adroit entrepreneurial marketing which recognized consumer needs and adjusted product accordingly achieved market share which is the final determinant in the equation.

The Advent of Compression

We would argue that it is in the best interest of a profit-making enterprise to craft product to a minimum or reasonable range of complexity in order to appeal to the broadest universe of consumers possible. The new and sudden focus on the concept of an interface standard has been helped along by the recent announcements by video programmers of their intention to introduce compression systems into their video delivery as early as next year. Several programmers have announced that they plan to utilize the General Instrument/AT&T compression system for cable and HSD, while another has announced an agreement to utilize technology developed by Scientific-Atlanta for commercial use. At the same time, Hughes has selected Thomson to supply the encryption-decompression system for DirecTv. The movement in the compression field is another indication of new technological advances being made available to satisfy consumer demand for services. Up to this point, "market forces" continue to steer

industry developments toward what they perceive as the consumer's interest. We would also assume that a modicum of compatibility is built into their product planning in order to attract the largest number of consumers to their services.

But it is at this point that we believe the "rational market place" would call for a balance between an environment of total compatibility and a technology totally proprietary. This question has increasing relevance in view of the number of video delivery systems which are available for the consumer to choose from, including C-band, high-powered DBS, cable, MMDS, telephone fiber optics, and even coaxial cable or "twisted pair." With the onset of multimedia personal computer systems, Personal Communications Services, and Advanced Television, the implementation of one or more compression, encryption or transport systems becomes even more critical to the development of open network architecture. However, it should not be automatically construed that different media, technologies and usages in such an environment will result in incompatibility.

It is possible that the pace of technological advancement in the satellite field portends increased focus on issues of compatibility because HSD has such large consumer orientation. Because the satellite environment is particularly technology-oriented, we believe initial activities relating to compression as well as ATV will occur in HSD. However, it would be premature to address standards until the market place has developed further, and there is a clearer direction to these complex issues.

IV. THE ROLE OF THE FCC IN A TECHNO-ECONOMIC MARKET PLACE

Having isolated the specific technological and economic factors which have been activated not only by the change-out in decryption technology, but also by the introduction of newer program delivery systems, we now address ourselves to the complex task of describing an appropriate role for the Commission in the near whirlwind that is the HSD market place. Because the industry is so young, there is little history to draw from in terms of previous experiences in technological change. The difficulties of the industry's youth are further compounded by the fact that HSD lends itself to technological change so well while also having broad consumer ramifications. Thus, wise market place decisions become readily apparent and beneficial to the industry's development. Conversely, bad occurrences gain equally visible notoriety, witness the instability which resulted from the compromise of the original VCII security.

With the market place more secure, we can now count on the full technological exploitation of HSD with its almost limitless possibilities. SBCA believes that the appropriate role of the FCC is modulating the evolution of technology with a policy of insuring that the video delivery standards which the market place adopts do not create consumer chaos or conditions detrimental to competition among video services. The current technological climate presents an opportunity for the industry to take a leadership position in digital TV and be the vanguard for a worldwide standard. But

for this progress to move forward, the stumbling block of like-service incompatibility must not be allowed to occur unless the market place/consumer justifies it.

SBCA commends the Commission for examining the implications of incompatibility now. For example, the proposal for a multiple port interface, utilizing an open standard such as MPEG-2, may have merit under the present circumstances. It remains however to be completed, and until then we may continue to exist with market-driven, de facto standards. But by the time it comes to fruition, the needs and circumstances of the market may have changed.

There are also certain economic factors which argue against an open decryption interface standard. General Instrument's giant strides in achieving new signal security, has for the moment made HSD highly sensitive to any proposals which even smack of additional "change." Therefore the HSD industry is watching closely any movement forward of compression and encryption which has the potential to disrupt a now stabilized market.

In the end, however, we would urge the Commission to pursue its objectives in the following manner:

1) Encourage the market place development and implementation of appropriate standards which has technological utility but does not compromise the signal quality or security of the HSD industry.

2) Through proceedings such as this, continue to shine a light on both current and future technological developments which promise to enhance the delivery of video signals to the home.

3) Finally, act as a "bully pulpit" by addressing directly significant market place circumstances which, if left to their own devices, would threaten the development of a beneficent and diverse communications policy.

In conclusion, the Commission has given the opportunity to HSD participants to begin to analyze the ramifications of the new, state-of-the-art technologies. SBCA believes they are exciting developments which, in the end, can only enhance the appeal of HSD to consumers. Probably any conclusions at this time regarding their compatibility are at best premature and could serve to stifle new R&D which is already looking beyond.

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