

- o Showtime/The Movie Channel plans to sell Showtime and The Movie Channel on a direct retail basis nationwide to individual owners of private backyard earth stations through a toll-free 800 telephone number, at what we believe will be a competitive price.
- o Showtime/The Movie Channel does not intend to grant contractual exclusivity to any party that may be authorized to distribute its programming services to the backyard TVRO market.
- o Showtime/The Movie Channel has placed advertisements in several satellite television publications for the last several months to familiarize viewers with its programming services and to increase public awareness of its plans to scramble. Once we have finalized and announced our TVRO marketing plans, we plan to place further advertisements in these publications, and also to run on-air announcements on Showtime and The Movie Channel, in order to facilitate the ability of TVRO owners to subscribe to our services.

We estimate that the costs of scrambling the Showtime and The Movie Channel satellite services as of the anticipated date of full-time scrambling in May 1986 will total approximately \$9 million. This includes the costs of affiliate decoders, uplink equipment, the development of a back office, computer resources, advertising, and other expenses. Obviously, we would not incur such substantial expenses if we were not convinced of the need to scramble our signals to protect their integrity and help secure them from unauthorized commercial operations, and if we did not believe

that our services can be effectively marketed to private backyard earth station owners.

MTV Networks also intends to scramble the satellite signals of its programming services as soon as all affiliates have purchased and installed decoder boxes and there is a sufficient quantity of consumer decoders available. MTV also plans to use the M/A-COM VideoCipher II decoder and the M/A-COM DBS Control Center.

While scrambling will make a significant contribution to the effort to curb satellite signal piracy by unauthorized commercial operations, it will not be a panacea. Unfortunately, we anticipate that there may be a continuing commercial piracy problem even after scrambling is implemented. It is possible, for example, that certain people will purchase decoder boxes ostensibly to use in their own backyard for private viewing, but will in fact put the decoder box in a hotel, bar, apartment complex or other commercial property. In developing our scrambling plans, therefore, we have taken care to try to develop a system which will enable us to keep track of the location and the use of all the decoders that are authorized to receive our services. We will also endeavor to notify and educate all persons who subscribe to our programming services as to their legal obligations. We believe that a person who uses a consumer decoder box to intercept scrambled satellite signals for an unauthorized commercial purpose is subject to both civil and criminal penalties under the 1984 Cable Act applicable to willful violations for purposes of direct or indirect commercial advantage or private financial gain.

In addition to the above, we have a few specific comments concerning the legislation before this Subcommittee. H.R. 1769, sponsored by Representative Gregg, would impose a two-year federal moratorium on scrambling of satellite cable programming. Rather than make the marketplace more competitive, we feel that enactment of this legislation would inhibit the competitive forces that are developing in the marketplace. As of now, only two satellite cable programming services--HBO and Cinemax--are scrambled full-time. In addition to the services offered by Showtime/The Movie Channel and MTV Networks, several other cable programming services have announced plans to scramble their signals within the next year.

The satellite TVRO industry is still in a very early stage of development.. We believe that as it grows and develops, it is likely that competitive forces will come into play that will offer consumers a wide range of options. In addition, it is our hope that as the marketplace matures and the number of decoders manufactured increases, the unit price of each decoder will decline significantly. These developments would be curtailed if a two-year moratorium on scrambling were imposed. Moreover, such a moratorium would severely hamper the ability of satellite cable programmers and operators to combat the problem of commercial signal piracy detailed above.

H.R. 1840, sponsored by Representative Tauzin, would give the Federal Communications Commission the authority to establish prices, terms and conditions for backyard TVRO owners' access to scrambled satellite programming. The provisions of this bill are similar to provisions included in legislation introduced in the last Congress

that, as part of the compromise resulting in the passage of the Cable Communications Policy Act, were ultimately not included in the final bill enacted in 1984.

We continue to believe, as we indicated two years ago, that there is no need to legislate a compulsory licensing procedure for scrambled programming administered by the FCC, and that the private marketplace will work well if given a chance to function. In addition, there would be a hornet's nest of problems in seeking to implement any compulsory licensing procedure to be administered by the federal government. For example, the FCC would encounter the following problems, among many others, in attempting to implement such a licensing mechanism:

- o The costs of acquiring programming vary considerably among program suppliers and program services and vary further due to such factors as program exclusivity (for example, Showtime/The Movie Channel has a five-year exclusive agreement with Paramount Pictures for national pay television rights to Paramount motion pictures). If one programming service's costs are higher than another's, it would be impossible to set rates that yielded comparable profit margins without pricing one service higher than another and thus putting it at a competitive disadvantage with consumers. The marketplace is the best way to sort this out.
- o At the cable system level, rates charged to cable subscribers vary among different cable operators, among different systems of a multiple service operator, and even

within the same system under different tiers of service.

It would be virtually impossible for a government agency to set rates for sales of programming to TVRO owners that were easy to administer and yet competitive and equitable in relation to those of other means of distribution. Again, the marketplace is the appropriate mechanism for dealing with this.

- o Forcing satellite program services to sell at prescribed rates to backyard dish owners would compromise their ability to carry on their normal business with cable operators, SMATV operators, and their other distributors.
- o A compulsory licensing procedure may diminish the ability of programming services to deny authorization to decoder boxes which may be used for unauthorized commercial purposes.

In addition, the FCC has deregulated pay cable, STV and MDS rates, and Congress deregulated basic cable rates beginning in 1987 in the Cable Communications Policy Act of 1984. FCC regulation of satellite cable programming, a competitive technology, would fly in the face of the ongoing government effort to deregulate the communications marketplace.

In light of these strong concerns, we believe it is important for the marketplace to be given a chance to work in the post-scrambling environment, as was contemplated when the 1984 cable legislation was enacted.

The Showtime/The Movie Channel executives who attended the recent SPACE convention found that the majority of TVRO dealers with

whom they spoke recognized the reasons for scrambling satellite cable programming services and agreed that it was appropriate for TVRO owners to pay to receive scrambled satellite programming. Many of these dealers, however, reported that they were frustrated by a small minority of dish dealers who may have oversold their customers initially by claiming that satellite cable programming could be received for free, without pointing out that those services that decided to incur the cost of scrambling would have the right to charge license fees to receive their programming in the future. We believe that these hearings can serve a major purpose in helping to educate the public and the industry as to the facts and in helping to build a viable marketplace for sales to home TVRO owners.

In conclusion, the backyard earth station market is still in a very early stage of development. We do not yet know exactly what sort of a market it will turn out to be, but we at Viacom hope it will be a major market. One year ago, a major concern on Capitol Hill was that there be a compatible technology for the descrambling of satellite cable programming services, so that an individual owning a backyard earth station would have to purchase or lease only one decoder in order to receive a wide range of services. At this point, several programmers have independently announced that they will use a single scrambling technology. We believe this is one indication that the private marketplace will develop in a fair and efficient manner as the industry matures, so as to serve the best interests of consumers while at the same time protecting the integrity of the programmers' signals. We would like to work with you to accomplish these ends.

TESTIMONY OF

JACK VALENTI

PRESIDENT

MOTION PICTURE ASSOCIATION OF AMERICA, INC.

ON SATELLITE EARTH STATIONS

BEFORE THE HOUSE SUBCOMMITTEE ON TELECOMMUNICATIONS,
CONSUMER PROTECTION AND FINANCE

June 12, 1986

JV

Mr. Chairman, and Members of the Subcommittee:

My name is Jack Valenti.

I am President and Chief Executive Officer of the Motion Picture Association of America, Inc. (MPAA). MPAA's members are among the leading producers and distributors of motion pictures and television programs in the United States. The member companies of MPAA are:

Columbia Pictures Industries, Inc.

Walt Disney Productions

De Laurentiis Entertainment Group, Inc.

MGM Entertainment Company

Orion Pictures Corporation

Paramount Pictures Corporation

Twentieth Century Fox Film Corporation

United Artists Corporation

Universal City Studios, Inc.

Warner Bros. Inc.

We at MPAA support and advocate these principles in the satellite earth station environment:

1. Copyrighted programs should be accessible to all in this nation who want and choose to receive them. No one should be denied a choice.

2. Marketplace prices for programs should be paid by owners of satellite earth stations, without government imposing pricing in any form.

3. The marketplace should be nourished by competition and not dominated by any one group or small band of powerful corporations.

That is what we believe in. That is what we support. And that is what we judge to be fair and equitable.

Given the blur and confusion of controversy over TVROs, it is not without some irony that we find that, ultimately, what owners of TVROs want and what owners of copyrighted programs want are one and the same.

Consumers want access to our copyrighted material.

COMPETITION AMONG PROVIDERS TO TVRO OWNERS

Scrambling has permitted program services to secure their signals, and to market them to TVRO owners no matter where they may live, at marketplace prices.

Market rates will be determined, of course, by free and open competition. Consumers will benefit from vigorous price competition among those satellite-delivered programming services that have chosen to extend their market to include TVRO owners.

Efforts to serve TVRO owners have come a long way in the last 18 months, since the passage of Section 705. We already see real evidence of aggressive price competition.

Last fall, Time Inc.'s Home Box Office announced that it would market HBO and its companion movie service, Cinemax, directly to earth station owners for \$12.95 per month per service, or \$19.95 for HBO and Cinemax in combination.

Shortly after HBO/Cinemax made public its rates for private TVRO service, Showtime/The Movie Channel (its smaller competitor) announced rates some 15 percent lower.

All of these services are available directly from the program services, or, in many parts of the country, through intermediary providers.

As a result of this competition, we find that TVRO owners can obtain access to those satellite-delivered cable program services that have already scrambled at prices that are highly competitive with what cable subscribers pay for the same service.

There are other favorable developments in this new marketplace:

-- Every satellite-delivered cable program service that has announced scrambling plans has also announced it will market its service to TVRO owners.

-- Numerous companies have announced their intention to provide convenient packages of programs to earth station owners.

-- A single signal decoder system (the M/A-Com VideoCipher II) is emerging as a de facto industry standard. This limits the amount of new equipment the TVRO owner needs to receive these signals.

-- Multiple companies are manufacturing and marketing signal decoders, and many earth station manufacturers propose to incorporate decoders into their new equipment, at low prices.

All of this augurs well for TVRO owners. We share the interest of members of Congress that this form of competition should continue to expand.

COMPETITION AMONG DELIVERY SYSTEMS

Competition between media increases the diversity of ideas, and maximizes consumer choices. To this end, our national communications policies discourage concentration of control over the media by a few entities, in order to protect the public interest in competition both nationally and locally.

For example, a TV station owner may not exercise control over the operation of cable television systems in the same area where he holds a TV license. And we limit the total number of TV stations any one entity may control nationwide.

By the same token, we should be wary that cable system operators not unduly restrict or control the availability of satellite-delivered services to consumers in local markets. This would be an unwelcome extension of the already alarming power which now resides in too few hands.

In 1982, the two largest cable multiple system operators (MSOs) served 12.9% of all cable subscribers. In 1986, the top two MSOs will serve 21.1% of all cable subscribers. Some estimates indicate the top five MSOs now serve about 45% of all cable subscribers. That share is projected to increase to 70% by 1990.

Let us understand, with awful clarity, what this means.

A cable system is a geographic monopoly. There is only one cable system to a neighborhood or a portion of a city. If you, as a cable subscriber, don't like the programming or the service or the treatment you receive from your cable system, you have no alternative. You either cancel your subscription, or you hold your tongue and your anger, because you have no place to go, no competitor who will give you what you want.

Meanwhile, the cable system is the sole arbiter of what the community sees on its TV set.

This kind of imperial authority is totally unlike that of any other communications medium -- unlike newspapers, TV stations, even networks. It is absolute and free of the nagging torment of competitors. (Competitors are such a bore -- how nice it must be to have none.)

Now, let us multiply this power. If two or three corporations control 50, 60 or 70 percent of all cable subscribers, that means three entities literally tell the American public what they will or will not see on cable. As of this moment, garmented with such concentrated power, the big MSOs have not been shy in throwing their weight around.

Cable must not be permitted to stifle the growth of its most promising new competitors. Local cable systems should be fully subject to competition from TVROs, MMDS, and even direct, head-

Any new system must, now or soon, lead to a marketplace design that is not a compulsory license, and any interim, transitional measures must be viewed as a process leading away from artificial pricing and toward a free marketplace. There must also be a "sunset" provision for this interim system, allowing for a free marketplace to emerge and operate.

In our view, Section 705 of the Communications Act has made possible a legitimate TVRO industry; it creates no impediments to a free marketplace. By contrast, Section 111 of the Copyright Act does impede the TVRO industry from competing with cable. For that reason, the latter law is an appropriate matter for Congressional review.

What Should Congress Do At This Time?

Mr. Chairman, I would like to conclude with some brief comments on what Congress should and should not do at this juncture.

There are several legislative proposals pending before this Committee which would interfere in various ways with the development of the TVRO marketplace. None of these should be enacted.

JV

**STATEMENT OF MARK S. FOWLER, CHAIRMAN
FEDERAL COMMUNICATIONS COMMISSION**

BEFORE THE

SUBCOMMITTEE ON TELECOMMUNICATIONS, CONSUMER PROTECTION AND FINANCE

OF THE

COMMITTEE ON ENERGY AND COMMERCE

JUNE 12, 1986

**"ENSURING ACCESS TO PROGRAMMING FOR THE BACKYARD SATELLITE DISH
OWNER - PART II"**

I RECOGNIZE THAT SEVERAL ISSUES HAVE ARISEN SURROUNDING SCRAMBLING SINCE FULL-TIME SCRAMBLING BEGAN ON JANAUARY 15, 1986. AMONG THESE ARE: THE AVAILABILITY OF DECODERS; THE PRICES CHARGED TVRO USERS BY PROGRAM DISTRIBUTORS FOR SERVICE, ESPECIALLY AS THEY RELATE TO THE PRICES PAID BY THOSE RECEIVING THE SAME SERVICE FROM A CABLE SYSTEM IN THE SAME COMMUNITY; THE MARKETING SCHEMES BEING UTILIZED BY PROGRAMMERS; AND THE AVAILABILITY OF NETWORK FEEDS TO TVRO USERS. BILLS HAVE BEEN INTRODUCED BOTH IN THE HOUSE AND THE SENATE THAT ADDRESS THESE ISSUES. SEVERAL OF THESE BILLS WOULD MANDATE A COMMISSION ROLE IN RESOLVING THESE ISSUES AND I WOULD LIKE TO TAKE THIS OPPORTUNITY TO COMMENT ON THE ROLE THAT VARIOUS BILLS WOULD, IF ENACTED, ASSIGN TO THE COMMISSION.

CHIEFLY, CURRENTLY PENDING LEGISLATION WOULD REQUIRE THE COMMISSION TO ESTABLISH A UNIFORM SCRAMBLING FORMAT OR INVOLVE IT IN SETTING THE RATES AND OTHER VIEWING TERMS ON A MARKET-BY-MARKET BASIS IF THE CONSUMER AND PROGRAM SUPPLIER ARE UNABLE TO REACH AN AGREEMENT WITHIN A SHORT TIME FRAME. OTHER LEGISLATIVE PROPOSALS WOULD REQUIRE THE COMMISSION TO MONITOR THE PRICE AND AVAILABILITY OF SCRAMBLED PROGRAMMING OR TO EXPEDITE THE PROCESSING OF TV TRANSLATOR STATION APPLICATIONS UNDER CERTAIN CIRCUMSTANCES.

WITH RESPECT TO A REQUIREMENT FOR THE COMMISSION TO ESTABLISH A UNIFORM SCRAMBLING STANDARD, IT APPEARS TO ME THAT THE MARKETPLACE IS IDEALLY SUITED TO MAKING SUCH SELECTIONS AND HAS, IN LARGE MEASURE, ALREADY ESTABLISHED THE

MVA Com "VIDEOCIPHER II" AS THE UNIFORM SCRAMBLING FORMAT. THERE IS LITTLE REASON TO BELIEVE THAT THIS WILL CEASE TO BE THE CASE. PROVIDERS OF SCRAMBLED PROGRAM SERVICES HAVE EVERY INCENTIVE TO SELL THEIR SERVICE TO DISH ANTENNA USERS. SUCH USERS CONSTITUTE A LARGE AND REASONABLY AFFLUENT ADDITIONAL MARKET FOR THEIR PRODUCT. ACCORDING TO PUBLISHED REPORTS AT LEAST 64 PERCENT OF TVRO SYSTEM OWNERS HAVE AN ANNUAL GROSS HOUSEHOLD INCOME ABOVE \$25,000 AND THE AVERAGE TVRO OWNER HAS AN ANNUAL HOUSEHOLD INCOME OF \$39,500. PROGRAMMERS HAVE A POWERFUL MOTIVE TO CHOOSE A SCRAMBLING SYSTEM THAT GIVES THEM ACCESS TO THIS POTENTIAL FOR MILLIONS OF ADDITIONAL SUBSCRIBERS WITHOUT NEEDING THE GOVERNMENT TO MAKE THAT DECISION FOR THEM.

Not one programmer who is scrambling in 1990 has gone out of business - Dealer have

THE REGULATION OF RATES IS A SECOND AREA IN WHICH PROPOSED LEGISLATION WOULD INVOLVE THE COMMISSION. WHILE I SHARE THE CONCERN THAT A WIDE CHOICE OF VIDEO SERVICES REMAIN AVAILABLE TO THE AMERICAN PUBLIC, I DO NOT BELIEVE THAT INVOLVEMENT OF THE COMMISSION IN SETTING THE PRICE TO BE PAID BY THE CONSUMER FOR SUCH SERVICES IS NECESSARY OR DESIRABLE. IT IS UNNECESSARY BECAUSE THE MARKET IS BY FAR THE BEST JUDGE OF WHAT PAY TV SERVICES SHOULD COST THE CONSUMER. IF THE COST FOR A SERVICE IS PRICED OUT OF LINE WITH SIMILAR SERVICES OR WITH ITS VALUE TO THE CUSTOMER THE PROGRAMMER WILL HAVE TO IMPROVE ITS OFFERING, LOWER ITS PRICES, OR FACE THE SEVERE DISCIPLINE OF THE MARKETPLACE -- BUSINESS FAILURE. IT IS UNDESIRABLE FROM MY PERSPECTIVE BECAUSE THE COMMISSION HAS ONLY LIMITED RESOURCES AND HAS NEITHER THE RESOURCES NOR THE EXPERTISE TO DETERMINE WHAT A "REASONABLE" CHARGE WOULD BE FOR EACH DIFFERENT PROGRAM SERVICE IN EACH DIFFERENT MARKET.

PUNISH INTENTIONAL INTERFERENCE WITH SATELLITE COMMUNICATIONS. THE COMMISSION STRONGLY SUPPORTS THESE EFFORTS AND WOULD BE HAPPY TO PROVIDE WHATEVER ASSISTANCE CONGRESS WOULD FIND HELPFUL WITH RESPECT TO SUCH LEGISLATION.

IN SUM, MOST OF THE ISSUES PRESENTED BY SCRAMBLING SEEM TO BE SUSCEPTIBLE TO MARKET-ORIENTED SOLUTIONS. INDEED, IN MANY WAYS IT APPEARS THAT THE MARKET IS WORKING ALREADY, A MERE FIVE MONTHS SINCE SCRAMBLING BEGAN. FROM TESTIMONY GIVEN THIS PAST MARCH AT YOUR HEARING ON THE SCRAMBLING ISSUE AND FROM ARTICLES IN THE TRADE PRESS IT APPEARS THAT IN LARGE MEASURE A SINGLE SCRAMBLING STANDARD HAS EMERGED, DECODERS ARE BECOMING WIDELY AVAILABLE, PROGRAMMERS ARE SETTING UP PROGRAM PACKAGES AND MARKETING STRUCTURES, AND, OVERALL, THE SKYS ARE NOT GOING DARK OR EVEN DIM. CERTAINLY, IF THERE ARE CREDIBLE ALLEGATIONS OF UNLAWFUL RESTRAINTS OF TRADE IN THIS AREA THEY SHOULD BE EXAMINED BY COMPETENT BODIES INCLUDING CONGRESS, THE DEPARTMENT OF JUSTICE, AND THE FEDERAL TRADE COMMISSION. HOWEVER, I BELIEVE THAT THE COMMISSION'S PRINCIPAL INVOLVEMENT SHOULD BE DIRECTED TO AUTHORIZING NEW TRANSLATOR AND LOW-POWER TV STATIONS AND TO LOCATING AND IDENTIFYING THE PERPETRATORS OF SATELLITE INTERFERENCE INCIDENTS WHEN THEY OCCUR.

I WOULD NOW BE HAPPY TO ANSWER ANY QUESTIONS THAT YOU MAY HAVE.

FCC ON SCRAMBLING: 'NO ACTION NEEDED'

FCC says VC II de facto standard

The FCC tells Congress the market is working, leaving dish owners in the cold.

If dish owners were looking for the Federal Communications Commission to rescue them from the stormy seas of scrambling, they were sadly mistaken. The FCC's long-awaited study of satellite signal scrambling concludes that there is "no need for immediate government intervention." The commission unanimously adopted the report, conducted at the request of Congress and in conjunction with the National Telecommunications and Information Agency, at its February 12 meeting. Now it's up to Congress to act.

"This is an excellent report, indicating . . . that mechanisms are, in fact, evolving in a reasonably competitive manner," said FCC commissioner Dennis Patrick, who has been designated by the White House to replace Mark Fowler as chairman when Fowler steps down this spring. Patrick hailed the commission's decision as one that "will, in the long term,

be very pro-consumer." It was an ironic statement, since Patrick has shown himself to be as marketplace-oriented as the man he is about to replace. This means there will be no helping hand from your friendly government agency—no life rafts in the form of rate regulation or protection, no decoder standards set, no fair-play rules suggested, not even an admonishing finger pointed at the cable industry, which, many feel, has manipulated scrambling to its own advantage.

KEY POINTS

It remains to be seen what the fine print of the 99-page report, which will not be made public for several weeks, will reveal. (The document has some 250 footnotes, staffers say.) But the study, as discussed at the FCC meeting, outlined the following scenario: 1) The marketplace for scrambled signals is a new one; 2) nonetheless, there are signs of growing competition;

3) the VideoCipher II descrambling system, on its own, has become a de facto standard, so there is no need to codify one; 4) attempts to break the VC II are being adequately fought; and 5) the broadcast networks have the right to scramble their affiliate feeds if they want and should not be required to sell them to dish owners in signal-poor areas.

Furthermore, the commission has denied a request by the Satellite Television Viewing Rights Coalition (STVRC) for a "full evidentiary hearing" on the scrambling issue. In filing the request, STVRC also asked that the FCC include in the record information from the Justice Department's investigation of anti-competitive practices in the pay-TV industry. The FCC has concluded that "no action is warranted with respect to superstation signals."

One consolation, however slight, is that the FCC has said it will monitor the development of the home market for scrambled satellite signals with quarterly internal reports, and will make a formal report to Congress on the subject in one year. Dish owners, however, should not get their hopes up. The report is likely to have no more teeth than the current scrambling study.

NOT SURPRISED

Supporters of the distressed home satellite dish industry were clearly less than thrilled by the FCC's inaction. They were not, however, surprised. "The commissioners had made up their minds ahead of time," said one insider. "They started from the philosophy that they did not want to get involved, and they found reasons to justify that."

Dish allies on Capitol Hill were equally miffed. "We did not expect much in the way of solid analysis and reasonable conclusions, and we were not disappointed. It was the predictable conclusion made by folks who had made up their minds before the investigation ever began," said Roy Neel, aide to



► Dennis Patrick replaces FCC Chairman Mark Fowler this spring.

FOUND A WAY TO MODIFY THE VIDEOCIPHER, FOR A PERIOD OF ONE MONTH
1987

J1

THE HONORABLE EDWARD J. MARKEY
CHAIRMAN
SUBCOMMITTEE ON TELECOMMUNICATION & FINANCE
HOUSE OF REPRESENTATIVES
H2-316 HOUSE ANNEX II
WASHINGTON, D.C. 20515

DEAR CHAIRMAN MARKEY:

DURING THE COURSE OF THE SUBCOMMITTEE HEARINGS ON JULY
1, 1987, ON THE SUBJECT OF SCRAMBLING OF SATELLITE VIDEO
SIGNALS TO THE HOME DISH MARKET, REPRESENTATIVE TOM TAUKE
ASKED THAT THE ANSWERS TO CERTAIN QUESTIONS BE SUBMITTED
FOR THE RECORD.

ATTACHED ARE QUESTIONS ASKED BY REPRESENTATIVE TAUKE
WHICH WERE DIRECTED TO GENERAL INSTRUMENT CORPORATION
AND OUR ANSWERS.

SINCERELY,

J. LAWRENCE DUNHAM

Attachment
cc: REPRESENTATIVE TOM TAUKE w/ attachment

QUESTIONS SUBMITTED BY CONG. TAUKE

1. I UNDERSTAND THAT A LARGE NUMBER OF VIDEOCIPHER (r) II
DECODERS HAVE BEEN COMPROMISED BY "PRIATE" DECODING
INTEGRATED CIRCUIT CHIPS. PLEASE EXPLAIN "COMPROMISING."
WHAT IS THE CURRENT BLACK MARKET PRICE FOR THE CHIPS?
HOW MANY DECODERS HAVE BEEN COMPROMISED AND WHAT IS
THE PROCEDURE TO IDENTIFY AND CANCEL OR NULLIFY
THOSE THAT HAVE BEEN MODIFIED? WHAT IS THE POSSIBILITY
OF ERROR IN IDENTIFYING A NORMAL UNIT AS ONE THAT HAS
BEEN MODIFIED? ARE THERE ANY APPEAL PROCEDURES?

A. ~~THE VIDEOCIPHER (r) II SYSTEM HAS NOT BEEN COMPROMISED
THERE WAS A TEMPORARY BREACH OF SECURITY, BUT WE HAVE
AN ONGOING COMPREHENSIVE PROGRAM TO ASSURE THE INTEGRITY
OF THE SYSTEM.~~

WHAT WAS ATTACKED WAS THE MANAGEMENT OF THE PROGRAM
KEY WITHIN ONE OF THE INTEGRATED CIRCUITS. THE
AUDIO PORTION OF VIDEOCIPHER (r) II IS DIGITALLY PROCESSED
AND ENCRYPTED USING THE DATA ENCRYPTION STANDARD
ALGORITHM. THIS ALGORITHM HAS BEEN CERTIFIED
BY THE U.S. GOVERNMENT AS BEING ESSENTIALLY UNBREAKABLE.
~~LATE IN 1986, SOME ENTERPRISING TECHNICAL "PRIATES"
FOUND A WAY TO MODIFY THE VIDEOCIPHER, FOR A PERIOD OF ONE MONTH ENDING~~

MARCH 15, 1987, WHERE WE REPAIRED FOR FREE ANY DECODERS THAT WERE ILLEGALLY MODIFIED. WE EXPECT THAT THE VIDEOCIPHER (r) II SYSTEM SECURITY WILL CONTINUE TO BE SUBJECTED TO ATTACKS, AND WE WILL CONTINUE TO BE SUBJECTED TO ATTACKS, AND WE WILL CONTINUE TO RESPOND WITH AN APPROPRIATE COMBINATION OF LEGAL TECHNOLOGICAL MEASURES. WE OCCASIONALLY HEAR THAT MODIFIES CHIPS OR MODIFIED DECODERS HAVE BEEN SOLD FOR PRICES IN THE RANGE OF \$250.00-\$900.00. SINCE THIS IS AN ILLEGAL "MARKETPLACE," INFORMATION ON PRICES IS NOT RELIABLE.

WE HAVE NO WAY OF KNOWING FOR CERTAIN HOW MANY DECODERS HAVE BEEN COMPROMISED, BUT WE BELIEVE THAT IT DOES NOT EXCEED 30,000 BECAUSE WE CAN ACCOUNT FOR VIRTUALLY ALL OF THE DESCRAMBLERS THAT WE HAVE SHIPPED EXCEPT FOR THIS NUMBER. THESE 30,000 WERE MANUFACTURED BEFORE THE BEGINNING OF 1987, WHEN WE MODIFIED THE DESCRAMBLER DESIGN TO PRELUDE THE ILLEGALLY-MODIFIED DESCRAMBLERS.

IN ADDITION, WE ARE CONTINUING TO INVESTIGATE AND HOPE TO SOON CONTINUE OUR ELECTRONIC COUNTERMEASURES AGAINST ADDITIONAL ILLEGALLY-MODIFIED DESCRAMBLERS.

WHILE THIS MAY SEEM LIKE A LARGE NUMBER, WE HAVE ALREADY TURNED OFF ABOUT 12,000 OF THE ILLEGALLY-MODIFIED DESCRAMBLERS.

SPECIFIC DESCRAMBLER ADDRESSES OF MODIFIED DESCRAMBLERS WERE OBTAINING WHEN U.S. MARSHALS EXECUTED SEIZURE ORDERS AT THE PREMISES OF SOME OF THESE MANUFACTURERS AND PROMOTERS. USING ELECTRONIC COUNTERMEASURES IN FEBRUARY AND IN MAY, SOME 12,000 OF THESE DESCRAMBLERS HAVE BEEN DEACTIVATED. OTHER DESCRAMBLERS WERE DEACTIVATED BASED ON OTHER INFORMATION. MOST OF THE ILLEGALLY-MODIFIED UNITS WERE BLACKED OUT OR RECEIVED SPECIFIC MESSAGES WHEN WE INSTITUED ELECTRONIC COUNTERMEASURES. WE ARE NOT WILLING TO DISCLOSE OUR SOURCES OF INFORMATION OR THE PROCEDURES WE USE TO DEACTIVATE THESE MODIFIED DESCRAMBLERS.

WHEN A DESCRAMBLER IS DEACTIVATED, THE OWNER HAS NO WAY OF KNOWING WHETHER WE HAVE DEACTIVATED IT OR IT HAS SIMPLY STOPPED WORKING DUE TO FAILURE OF A COMPONENT. THE OWNER WHO KNOWS HIS DESCRAMBLER HAS BEEN MODIFIED IS LIKELY TO ASSUME THAT WE HAVE DEACTIVATED IT. IF WE MISTAKENLY DEACTIVATED A UNIT THAT WAS NOT ILLEGALLY MODIFIED, THE OWNER IS LIKELY TO ASSUME THAT IT WAS CAUSED BY COMPONENT FAILURE, AND WOULD INVOKE THE WARRENTY TO HAVE IT REPAIRED AT NO COST.

OF THE ROUGHLY 12,000 DESCRAMBLERS THAT HAVE BEEN TURNED OFF, WE HAVE BEEN ABLE TO DETERMINE THAT 44 WERE NOT ILLEGALLY MODIFIED. CONSIDERING THAT THERE WERE ABOUT 120,000 AUTHORIZED CUSTOMERS AT THE TIME THE ELECTRONIC COUNTERMEASURES BEGAN, THIS IS A RATIO OF 0.04% OF THE AUTHORIZED SUBSCRIBERS. IN FACT, ONLY SOME OF THE 44 UNITS WERE IN USE BY HOME SUBSCRIBERS. IN FACT THE REMAINDER WERE SENT IN FOR REPAIR BY DEALERS, CABLE TV OPERATORS OR COMMERCIAL ENTITIES. CONSUMER SUBSCRIBERS WILL BE SHIPPING EXPENSES THEY INCURRED.

2. WHAT ARE THE PROCEDURES FOR AN INDIVIDUAL WISHING TO SELL HIS VC-II DECODER TO ANOTHER PERSON? ANAT IF THE NEW OWNER DISCOVERS THAT THE UNIT HAS BEEN COMPROMISED?

A. THE VIDEOCIPHER(r) II IS PERSONAL PROPERTY THAT MAY BE BOUGHT AND SOLD FREELY. THERE ARE NO PROCEDURED OR APPROVALS NEEDED.

IT IS HIGHLY UNLIKELY THAT A CONSUMER COULD PURCHASE AN ILLEGALLY-MODIFIED DESCRAMBLER WITHOUT KNOWING THAT IT WAS MODIFIED. THE SCRAMBLING PROGRAM HAS RECEIVED WIDESPREAD PUBLICITY IN THE TVRO COMMUNITY, PARTICULARLY CONCERNING THE SUGGESTED RETAIL PRICE OF LEGITIMATE DESCRAMBLER, THE MONTHLY SUBSCRIPTION FEES OF PROGRAMMERS, AND THE AUTHORIZATION PROCEDURES REQUIRED FOR "TURNING ON" LEGITIMATE DESCRAMBLERS.

REGRETTABLY, THERE HAS ALSO BEEN CONSIDERABLE PUBLICITY, CARRIED OVER SATELLITE CHANNELS, ABOUT ALLEGED DEVICES TO "BEAT THE SCRAMBLING SYSTEM" AND AVOID PAYMENT OF SUBSCRIPTION FEES TO THE PROGRAMMERS. WE CONTINUE TO THINK IT UNLIKELY THAT A CONSUMER WAS UNAWARE OF THIS PUBLICITY AND UNKNOWINGLY PURCHASED A MODIFIED DESCRAMBLER.

NEVERTHELESS, IF ANY CONSUMER CAN ESTABLISH TO OUR SATISFACTION THAT HE OR SHE IS IN FACT THE INNOCENT PURCHASER OF AN ILLEGALLY MODIFIED DESCRAMBLER AND IS WILLING TO HELP US LOCATE AND PROSECUTE THE PARTY WHO DEFRAUDED HIM, WE ARE PREPARED TO REPAIR THE DESCRAMBLER AT NO CHARGE.

under warranty

3. WHAT IS THE CURRENT VC-II SUPPLY AND DEMAND STATUS, AND HOW WILL THIS CHANGE IF DA PROCEEDS TOWARDS ADOPTING THE VIDEOCIPHER(r) II AS A FORMAL OR DE FACTO STANDARD?

A. THE DEMAND FOR CONSUMER DESCRAMBLING HAS INCREASED SUBSTANTIALLY IN RECENT MONTHS, AS MORE PROGRAMMING SERVICES BEGAN SCRAMBLING AND AS MARKETPLACE UNCERTAINTY AND CONFUSION HAS DECREASED.

AS OF JUNE 1, SOME 294,000 CONSUMER DESCRAMBLERS HAVE BEEN SHIPPED. SOME 30,000 WERE SHIPPED DURING APRIL AND DURING MAY, AND SOME 40,000 DURING JUNE. THERE WERE SOME 176,000 CONSUMER DESCRAMBLERS AUTHORIZED BY JUNE 1, AND AUTHORIZATIONS HAVE BEEN RUNNING AT THE RATE OF ABOUT 15-20,000 PER MONTH. WE HAVE ORDERS ON THE BOOKS, FOR DELIVERY AT VARIOUS TIMES THROUGH THE END OF THE YEAR, FOR ABOUT 400,000 DESCRAMBLERS. THESE NUMBERS INCLUDE BOTH STAND-ALONE UNITS AND DESCRAMBLER MODULES FOR DELIVERY TO RECEIVER MANUFACTURERS.

WE HAVE BEGUN SHIPPING A LIMITED NUMBER OF DESCRAMBLERS TO DISTRIBUTORS FOR THE CANADIAN MARKET, SINCE TURNER BROADCASTING IS MARKETING ITS CNN SERVICE TO CONSUMERS IN CANADA. LATER THIS YEAR, IF CANADIAN PROGRAM SERVICES

CHOOSE THE VIDEOCIPHER (r) II SYSTEM, DEMAND IN CANADA WILL INCREASE.

IN RECOGNITION OF THESE INCREASING LEVELS OF DEMAND, WE HAVE TAKEN A NUMBER OF THESE INCREASING LEVELS OF DEMAND AND TAKEN STEPS TO ENSURE THAT AN ADEQUATE SUPPLY OF DESCRAMBLERS IS AVAILABLE IN THE MARKETPLACE.

IN APRIL, THE COMPANY COMMITTED \$1 MILLION IN CAPITAL IMPROVEMENT TO THE PUERTO RICO MANUFACTURING FACILITY, AND ALSO COMMITTED SEVERAL MILLION DOLLARS TO PURCHASE LONG LEAD-TIME PARTS AND COMPONENTS FOR VIDEOCIPHER (r) II UNITS.

IN MAY, WE ANNOUNCED THAT WE PLAN TO INVEST AN ADDITIONAL \$4 MILLION TO EXPAND PRODUCTION CAPACITY. THIS INVESTMENT WILL GIVE US A MANUFACTURING CAPACITY OF MORE THAN 100,000 DESCRAMBLERS PER MONTH BY SEPTEMBER, AND AS MUCH AS 130,000 PER MONTH BY EARLY 1988.

OVER THE LAST SEVERAL MONTHS, CHANNEL MASTER HAS BEEN MANUFACTURING AND SUPPLYING US WITH 10,000 DESCRAMBLING MODULES PER MONTH. CHANNEL MASTER IS LICENSED AS A SECOND SOURCE MANUFACTURER.

AT THE JULY 1 HEARING, CHANNEL MASTER STATED THAT IT WOULD INCREASE ITS MANUFACTURING CAPACITY AND IN AUGUST WOULD BEGIN DIRECT SALES OF DESCRAMBLER MODULES TO OTHER MANUFACTURERS FOR INCORPORATION IN INTEGRATED RECEIVER/DESCRAMBLERS. CHANNEL MASTER SAID THAT IT WILL BE SELLING THESE AT THE RATE OF ABOUT 30,000 PER MONTH BY THE END OF 1987.

BASED ON CURRENT AUTHORIZATION LEVELS AND OUR MODELS OF THE MARKETPLACE, OUR CURRENT PROJECTION IS THAT THERE WILL BE APPROXIMATELY ONE-HALF MILLION CONSUMER DESCRAMBLERS IN DISTRIBUTION BY SEPTEMBER. WE BELIEVE THAT THESE STEPS I HAVE OUTLINED WILL PROVIDE ADEQUATE CAPACITY TO MEET THE EXPECTED DEMAND FOR DESCRAMBLERS. IN PARTICULAR FOR CANADA, WE DO NOT EXPECT ANY SUBSTANTIAL DEMAND INCREASES UNTIL THE SEPTEMBER TIME FRAME, AT WHICH TIME THERE SHOULD BE AN ADEQUATE SUPPLY OF DESCRAMBLERS.

4. WHAT ARE THE NORMAL CHARGES AND PROCEDURES FOR REPAIR AND MAINTENANCE ON THE VC-II'S?

A. IF THE GENERAL INSTRUMENT VIDEOCIPHER (r) II STAND-ALONE UNIT STOPS WORKING, THE CONSUMER CALLS OUR REPAIR CENTER IN NORTH CAROLINA AND RECEIVES AN AUTHORIZATION NUMBER TO RETURN THE UNIT FOR REPAIR. HE SHIPS THE UNIT TO OUR REPAIR CENTER. IF, UPON VISUAL INSPECTION, IT APPEARS THE UNIT HAS BEEN ILLEGALLY MODIFIED, THE REPAIR CENTER CALLS THE OWNER, TELLS HIM THAT THE WARRANTY HAS BEEN INVALIDATED, AND OFFERS TO REPAIR THE UNIT FOR PREPAYMENT OF \$295.00. IF THERE ARE NO VISUAL INDICATIONS THAT THE UNIT HAS BEEN ILLEGALLY MODIFIED, THE REPAIR CENTER EITHER REPAIRS THE UNIT OR REPLACES IT WITH A PROPERLY WORKING UNIT AND RETURNS IT TO THE CUSTOMER AT NO COST TO THE CUSTOMER.

only if under warranty

5. WHAT IS THE MAXIMUM NUMBER OF SUBSCRIBERS THAT CAN BE HANDLED BY THE ENTIRE SYSTEM INCLUDING THE VC-II AND THE GENERAL INSTRUMENT COMPUTER SYSTEM?

A. THE NUMBER OF SUBSCRIBER ADDRESSES THAT THE VIDEOCIPHER II SYSTEM CAN HANDLE IS VERY VERY LARGE, FAR GREATER THAN ANY POSSIBLE NUMBER OF SUBSCRIBERS. HOWEVER, THERE IS A RELATIONSHIP BETWEEN THE NUMBER OF SUBSCRIBERS AND THE RATE AT WHICH REAUTHORIZATION MESSAGE CAN BE SENT. FOR EXAMPLE, WITH TODAY'S LEVEL OF SUBSCRIBERS, REAUTHORIZATION MESSAGES CAN BE SENT SEVERAL TIMES PER DAY TO EACH SUBSCRIBER. WITH 1 MILLION SUBSCRIBERS, EACH SUBSCRIBER'S REAUTHORIZATION MESSAGE CAN BE REPEATED EVERY 22 HOURS. AS THE LEVEL SUBSCRIBERS INCREASES, THIS ADDRESSING RATE WILL DECREASE. AT SOME POINT, IF WE RETAIN CURRENT OPERATING PARAMETERS, THE RATE WOULD BE UNACCEPTABLY LOW, AND THERE WOULD BE A RISK THAT SOME CUSTOMERS WOULD NOT RECEIVE THEIR REAUTHORIZATION FOR THE NEXT MONTH. WE ARE ALREADY WORKING ON PLANS TO INCREASE THE REAUTHORIZATION CAPACITY OF THE SYSTEM. FOR EXAMPLE, WE WILL REPLACE OUR 9.6 KILOBIT DATA LINKS WITH 14.4 KILIOBITS LINKS. WE WILL ADD THE CAPACITY OF THE HORIZONTAL ONLY THE VERTICAL BLANKING INTERVAL. THERE ARE ADDITIONAL CHANGES THAT WE CAN IMPLEMENT AS THE NUMBER OF SUBSCRIBERS GROWS, IN ORDER TO MAKE SURE THAT THE REAUTHORIZATION RATE WILL REMAIN ADEQUATE.

6. WHAT IS THE MAXIMUM NUMBER OF CHANNELS THAT CAN BE HANDLED BY THE VC-II?

A. THE MAXIMUM NUMBER OF PROGRAM CHANNELS THAT CAN BE HANDLED BY THE VIDEOCIPHER (r) II SYSTEM IS 240.

number of tier lists for VCII.

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DATE: March 8, 1989

TO: All Members - House Subcommittee on
Telecommunications & Finance, Senate
Subcommittee on Communications

FROM: Mark C. Ellison, Vice President Government
Affairs and General Counsel - SBCA

RE: VideoCipher II Descrambling System

The SBCA has been advised that some Members are receiving calls and letters pertaining to the status of the home satellite television industry and the introduction of the VideoCipher II Plus scrambling system (referred to herein as the "Plus"). This report is written to address that topic.

VIDEOCIPHER II AND THE VIDEOCIPHER II PLUS -

"IS MY DESCRAMBLER GOING TO BE WORTHLESS?"

The short answer to that question is NO. General Instrument Corporation (GI), manufacturer of the VideoCipher system, has stated publicly that they will not make the higher tier bits available to existing programming services. Second, we are unaware of any desire on the part of programmers in the lower 56 tier bits to move to higher tier bits, in fact the contrary is true.

As many of you are aware, the home satellite television industry is struggling with a very serious signal theft problem. It is estimated that nearly one half of all VideoCipher consumer descramblers in use have been illegally modified to receive programming without proper authorization. The industry is taking many steps to bring that problem under control. One aspect of that campaign is the introduction of new versions of the VideoCipher with enhanced technological security. Later this year, GI will introduce the Plus as a part of this effort.

All scrambled programming services (there are currently 40) use the VideoCipher II ("VCII") manufactured by GI. The VCII has 56 "tier bits" for the carriage of programming services. Tier bits are similar to channels, however, a tier bit can carry more than one programming service. (For example, CNN and Headline