

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Implementation of Section 17 of the Cable)
Television Consumer Protection and) ET Docket No. 93-7
Competition Act of 1992)
)
Compatibility Between Cable Systems and)
Consumer Electronics Equipment)

**PETITION FOR PARTIAL RECONSIDERATION
AND REQUEST FOR CLARIFICATION**

The National Cable Television Association, Inc. ("NCTA"), by its attorneys, hereby seeks partial reconsideration and clarification of certain aspects of new regulations, released by the Commission on May 4, 1994, regarding compatibility between consumer electronics equipment and cable systems.¹

Introduction and Summary

NCTA has actively participated in the Cable-Consumer Electronics Compatibility Advisory Group (CAG) efforts to develop joint industry recommendations regarding implementation of the compatibility provisions

¹ In the Matter of Compatibility Between Cable Systems and Consumer Electronics Equipment, First Report and Order, ET Docket No. 93-7, FCC 94-80, released May 4, 1994.

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of the 1992 Cable Act, 47 U.S.C. section 624. Over the past eighteen months, the CAG and the EIA/NCTA Joint Engineering Committee (JEC) have made substantial inroads in ensuring that consumers are able to use the special features of their television and video cassette equipment while enjoying the full benefit of cable-delivered programming services.

In general, NCTA is pleased that the Commission adopted many of the CAG's recommendations concerning short-term and long-term measures to improve compatibility. These include requiring cable operators to offer supplemental equipment and consumer education to address potential problems associated with existing equipment, and adopting a standard "Decoder Interface Connector" and component decoder/descrambler to achieve more effective compatibility in new equipment.² We also are pleased that the Commission adopted new technical standards for "cable ready" receivers and a standard channelization plan for new and rebuilt cable systems.

In reviewing the Report and Order and the new rules, however, we find that there are several areas where the rules result in certain unintended consequences or need to be clarified. In particular, we urge the Commission to reconsider its complete ban on any changes in remote control infrared codes because it is very likely to impede competition in the converter equipment market and lessen subscriber access to advanced services. Second, the requirement that the component Decoder Interface device separate conditional access functions from all other command set functions

² The Commission has given the JEC an additional 90 days, or until August 15, 1994, to complete the design of the Decoder Interface Connector and to resolve the technical issues associated with the standard.

could be misinterpreted as foreclosing cable operators from providing competitive services. Finally, the requirement that new set-top converters contain multiple tuners should be clarified to mean that such devices should provide only dual tuning capability.

I. **Remote Control Infrared Codes**

The new rules require cable operators to enable their set-top devices to be operated with subscriber-owned remote control units. Operators also are prohibited from taking any action to prevent the use of such remote controls, including changing the infrared (IR) codes used to operate the remote control functions of their set-top devices. As the Commission recognizes, this requirement means that the remote control capability of any replacement customer equipment provided to subscribers must employ the same infrared codes for remote control that are used with the subscriber's existing set-top equipment.³

The rule is intended to protect subscribers from having to replace remote control units they own if a cable operator changes its set-top converter equipment. While this is a desirable end, the means chosen to accomplish it and the negative, if unintended, impact on operators and suppliers requires reconsideration of the rule.

The Consumer Federation of America and the Home Recording Rights Coalition urged the adoption of this provision based on the belief that, absent such a prohibition, operators could disable a remote control unit that was compatible when purchased by changing the infrared codes, and consequently deterring subscribers from purchasing remotes from

³ Report and Order at para. 63.

independent retail outlets. There is little incentive, however, for operators to frustrate competition by arbitrarily switching out equipment in order to gain the limited return on remote control rental fees (particularly in light of the new rate regulations limiting equipment charges to actual costs). It would be both costly and impractical for any operator to engage in such practices. The more likely scenario is that an operator will change equipment that may contain new IR codes in order to upgrade its facilities and provide new enhanced services.

The rule has the unintended effect, however, of frustrating this objective. Indeed, one of the Commission's stated goals in this proceeding is to open up markets to competitive equipment providers in order "to give product developers and manufacturers, as well as cable system operators, the ability and incentives to introduce new products and respond to consumer demand."⁴ The Commission notes that the IR code restriction "will not prevent cable operators from using new equipment that includes additional infrared codes for new remote control functions that were not included in existing models of equipment."⁵ But, for several reasons, requiring operators to continue to use old codes severely limits their ability to upgrade to new or different equipment brands (whether fully addressable boxes or traditional converter-only boxes) and restricts competition in the in-home cable equipment market.

⁴ Report and Order at para. 5. ("The actions we are taking today will allow consumers to utilize equipment offered by a variety of suppliers, including the cable system operator, in a competitive market. ")

⁵ *Id.* at para. 63.

First, contrary to the Commission's assertion, cable operators do not have the purchasing power to dictate the specific IR code used by a vendor. But even if they had such clout, most IR codes are copyrighted or patented by the manufacturer and therefore are not available to another manufacturer without obtaining licensing rights. Manufacturers are often reluctant to allow their intellectual property to be incorporated into another manufacturer's equipment for fear that it will be implemented incorrectly or for other proprietary reasons.⁶ Assuming the new vendor could get the rights to use another company's IR codes, however, the new vendor would have to pay a license fee and this would significantly add to the cost of the equipment.⁷ This places a heavy burden on suppliers that hold a small market share and an even heavier burden on new vendors attempting to enter the market.

Second, as a practical matter, changing one set of infrared codes to conform to another set is a complex and costly process. Since converter equipment uses a variety of internal designs (apart from meeting certain FCC requirements for all terminal devices), it would be very difficult for a supplier to change the IR codes in new equipment to respond to a particular cable system's old IR codes. Unlike computer software which can be

⁶ The technical attributes of remote control devices, such as receiver sensitivity, pulse shaping and filtering, are designed by manufacturers to maximize the ability of their IR codes to be received by their converter boxes. Although universal remotes are able to replicate these codes, vendors are generally unwilling to give up the code unless it is implemented pursuant to the vendor's original design.

⁷ Moreover, the supplier would either have to manufacture boxes with a range of existing codes or produce different versions of the same product, each capable of responding to the remote control codes of various other manufacturers. Aside from the cost, this would present an inventory nightmare for suppliers.

downloaded to a standard machine, remote control IR codes can only be incorporated into set-top equipment by redesigning the remote transmitter device and the converter box receiver. Moreover, the codes are not based on a standard protocol. Different vendors utilize completely different signaling schemes and may even use different optical wavelengths or RF signaling between the remote and the receiver. And many of the IR codes in older equipment, which are likely candidates for change-out, do not have sufficient permutations to support a new feature-rich box.

Furthermore, if an operator is replacing obsolete equipment or installing new equipment because the vendor has gone out of business or discontinued a model, it would be neither efficient nor cost-effective to require new equipment to contain out-dated IR codes. And what about cable systems that provide basic converter boxes to subscribers in order to compensate for consumer electronic product tuner deficiencies, such as direct pick up interference, signal overload, and inadequate tuning range. Since these devices are installed on request and do not need unique and uniform descrambling circuitry, operators utilize a variety of brands with a variety of IR codes. And even older products from the same manufacturer often contain different codes depending on part availability and cost. In all of these cases, attempting to avoid changing IR codes would be almost impossible.

Lastly, in adopting any IR code policy, the Commission should recognize that the rationale for prohibiting changes in IR codes in set top converter/decoders -- to maintain the compatibility of subscriber-owned remotes -- applies with equal force to consumer electronic equipment. It is only reasonable that if consumers' remote control units must retain compatibility with cable system equipment, the remote control unit

purchased for Brand A's television set or VCR should be operable when it is used with another Brand 's television set or VCR. While we do not advocate any prohibition on IR code changes in either consumer electronic or set-top equipment, we simply point out that ensuring compatibility in one area of in-home consumer equipment and not the other defeats the purpose of the rule.

In sum, NCTA believes the Commission should appropriately balance its concern that consumers retain remote control compatibility with its overriding concern that new and more advanced equipment be made available to them from a variety of competitors and at an affordable cost. Indeed, there are less drastic approaches that will protect consumers without freezing IR code technology and the introduction of new equipment. First of all, consumers owning universal remote control devices today already have the flexibility to use their units with a variety of set-top equipment because the devices contain many of the IR codes. Such devices are either preprogrammed with vendor-specific codes that can be selected by the consumer or they are capable of "learning" specific new codes through various programming options. Moreover, under the compatibility rules, operators are required to inform subscribers of commercially available remote control unit models that are compatible with their set-top equipment.

As a long term measure, the consumer electronic equipment supplier industry could voluntarily adopt a new and relatively large set of standard infrared codes (128 or 256) that would support most existing and potential command set communication between the remote and the set-top or set-back equipment. Under this approach, once a customer obtained a universal remote with the standardized IR command set, if an operator later replaced

the decoder equipment with new equipment containing more advanced features, the remote would still operate the equipment.

In addition, the compatibility rules could require that "cable ready" receivers incorporate this universal set of IR commands and pass corresponding commands to the set-back decoder. By adopting a standard set of commands, all suppliers would be able to access all features and all universal remote control devices would be highly versatile. These universally-defined but extendible codes could be designed in conjunction with the ongoing work of the CAG's Decoder Interface Committee.

Therefore, in light of the foregoing, NCTA urges the Commission to reconsider and rescind its blanket decision to prohibit operators from changing the IR codes in their set-top equipment.

II. Separation of Remote Control Functions

In the Report and Order, the Commission states that the Decoder Interface Connector should "provide the capability to separate signal access control functions from other functions served through the connector."⁸ The Commission's stated intention is to promote competition in equipment used to receive cable service by enabling non-security functions to be provided through new products offered by retail vendors or to be incorporated into TV receivers and VCRs. While this policy is aimed at ensuring consumer access to competing video delivery systems, such as DBS, wireless cable and home satellite dish, it may put cable at a competitive disadvantage in the provision of non-security services.

⁸ Report and Order at para. 42.

As adopted, the policy could be interpreted as limiting the plug-in Decoder Interface device provided by a cable system to performing only a descrambling function. The module should be able, however, to offer the full panoply of cable services, provided it does not interfere with or impede a competing video delivery system or third party distributor's ability to connect to the television interface. Moreover, although TVs and VCRs may contain command set features to access video services, they should not be the sole source of innovative new services. Otherwise, a subscriber who purchases a "cable ready" TV or VCR could be disadvantaged as compared to a subscriber who continues to rent a set-top device and use an older TV or VCR. Such "cable ready" subscribers would be limited to the functionalities built into this equipment instead of being able to continue to access services via cable and other video delivery media.

Consumer interests will be best served by ensuring that alternative video providers, including cable, have the capability to attach Decoder Interface devices that are fully loaded with innovative new services, including on-screen displays and menus. As the Commission has strongly recommended, representatives of competing video delivery media and other affected industries are now participating in the ongoing Decoder Interface standard deliberations. This joint industry-wide effort will promote the development of an inter-operable, fully functional and consumer friendly interface standard.

Therefore, the Commission should clarify that allowing access control functions to be separated from other functions does not mean that cable operators are precluded from using the Decoder Interface module to provide functions other than the signal access control function.

III. Multiple vs. Dual Tuners

In the Report and Order, the Commission states that implementation of the requirement that cable operators provide set-top devices with "multiple" tuners be delayed until October 31, 1995. The CAG never envisioned, however, that such devices would contain any more than two tuners. The Advisory Group proposed that dual tuners would be incorporated in new equipment to facilitate "picture-in-picture" (PIP) capability or the ability "to watch one program while recording another". In addition, the CAG proposed an alternative "master-servant" concept, whereby two single-tuner boxes are connected in such a manner as to replicate the same functions of a two-tuner box (while protecting the second box from unauthorized use). This alternative approach to compliance with the dual-tuner requirement is important given the expected low demand for dual tuning capability.

As the Commission is aware, producing set-top converters with dual tuners will increase the cost of the equipment for all consumers receiving the box. But incorporating multiple tuners to cover every combination of picture-in-picture display would be cost-prohibitive and highly impractical given the small need for such capability. For example, wide screen (16 x 9 aspect ratio) TV receivers have "picture out of picture" where three 4 x 3 small pictures are displayed vertically on one side of a large 4 x 3 picture. In order to fully service such a receiver, converter boxes would require four tuners and descramblers.

Therefore, we urge the Commission to clarify that beginning in October 1995, set-top devices are required to contain only dual tuning capability.

CONCLUSION

For the foregoing reasons, NCTA respectfully requests that the Commission reconsider and clarify the issues described above.

Respectfully submitted,

NATIONAL CABLE
TELEVISION ASSOCIATION, INC.

By: Wendell H. Bailey
Wendell H. Bailey
Vice President
Science & Technology

By: Loretta P. Polk
Daniel L. Brenner
Loretta P. Polk

ITS ATTORNEYS
1724 Massachusetts Ave., NW
Washington, DC 20036
(202) 775-3664

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