

**ORIGINAL**

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

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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of

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Implementation of Section 304 of the  
Telecommunications Act of 1996

CS Docket No. 97-80

Commercial Availability of  
Navigation Devices

**REPLY COMMENTS OF  
THE NATIONAL CABLE TELEVISION ASSOCIATION**

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The National Cable Television Association ("NCTA") hereby submits its reply comments in response to the comments filed regarding the Notice of Proposed Rulemaking in the above-captioned proceeding<sup>1</sup> implementing Section 629 of the Communications Act as amended.<sup>2</sup>

**I. INTRODUCTION AND SUMMARY**

In our initial comments we made the following key points:

- NCTA supports the goal of Congress to make set-top boxes and other customer premises equipment ("CPE") available at retail while accommodating the legitimate security concerns of multichannel video programming distributors.
- Consistent with the intent of Congress, security issues must be recognized in any FCC rules mandating retail availability.

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<sup>1</sup> Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Notice of Proposed Rulemaking, CS Docket No. 97-80, FCC 97-53, released February 20, 1997 ("Notice").

<sup>2</sup> 47 U.S.C. §549.

- Any rules adopted in this proceeding should only be applied to digital, not analog or “hybrid” CPE (i.e., set-tops with both analog and digital capabilities).
- Any rules adopted should permit Multichannel Video Programming Distributors (“MVPDs”) to provide integrated CPE, including both security and non-security functions, so long as CPE without security functions is commercially available.
- Any rules adopted should not inhibit innovation and experimentation in the development and delivery of new consumer services which may depend upon improved set-top boxes and other CPE.
- The FCC should rely on voluntary industry efforts to develop standards for the interface between the CPE with the security functions and CPE without the security functions.
- Portability and interoperability of navigation devices are not mandated by statute and, in any event, voluntary industry efforts should be relied upon to achieve those goals.

Despite the varying interests represented by the numerous commenters in this proceeding, there is a remarkable degree of consensus on some of the key principles which NCTA and others have advocated in their initial comments. In light of the different perspectives of the commenters -- CPE manufacturers,<sup>3</sup> MVPDs,<sup>4</sup> makers of computer hardware and software and home automa-

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<sup>3</sup> Comments of the Telecommunications Industry Association (“TIA”); Comments of General Instrument Corporation (“GI”); Comments of Motorola (“Motorola”); Comments of Scientific-Atlanta, Inc. (“S-A”); Comments of Zenith Electronics Corporation (“Zenith”); Comments of Uniden America Corporation (“Uniden”); Comments of Gateway 2000, Inc. (“Gateway 2000”); Comments of Commercial Engineering (“Commercial Eng.”); Comments of the Consumer Electronics Manufacturers Association (“CEMA”).

<sup>4</sup> Comments of U S WEST (“U S WEST”); Initial Comments of Ameritech New Media, Inc. (“Ameritech”); Comments of Pacific Bell Video Services (“PacBell”); Comments of Bell Atlantic and NYNEX (“Bell Atlantic/NYNEX”); Comments of GTE (“GTE”); Joint Comments of DirecTV, Inc. and Hughes Network Systems, Inc. (“DirecTV”); Comments of United States Satellite Broadcasting Company, Inc. (“USSB”); Comments of Primestar Partners L.P. (“Primestar”); Comments of the Satellite Broadcasting and Communications Association of America (“SBCA”); Comments of CellularVision USA, Inc. (“CellularVision”).

tion devices,<sup>5</sup> programmers,<sup>6</sup> and consumer electronics retailers,<sup>7</sup> -- it is not surprising that views may differ in some particulars. But the initial comments in this docket provide hope that the key issues raised by implementation of Section 629 can be resolved promptly and with a minimum of government intervention.

In these reply comments, we focus on a number of fundamental principles that are critical to resolving this proceeding in a manner consistent with the words of the statute and with the underlying Congressional intent. As we show herein, the record overwhelmingly supports the conclusion that the Commission should: (1) recognize the concerns of MVPDs about security and harm to the network caused by the indiscriminate sale of certain CPE at retail; (2) apply any rules adopted in this proceeding to only digital, and not analog or "hybrid," CPE; (3) rely upon voluntary industry standards to develop an interface for security and non-security CPE; (4) allow MVPDs to provide integrated CPE with both security and non-security functions; (5) acknowledge that portability and interoperability are not required by the statute, and that voluntary, industry standards should be used to achieve those goals; (6) reject proposals mandating techni-

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<sup>5</sup> Comments of the Information Technology Industry Council and the Computing Technology Industry Association ("Info. Tech."); Comments of the Ad Hoc Computer and High-Technology Coalition ("Ad Hoc"); Comments of the Business Software Alliance ("BSA"); Comments of Eschelon Corporation ("Eschelon").

<sup>6</sup> Comments of Americast ("Americast"); Comments of Time Warner Entertainment Company, L.P. ("TWE"); Comments of Viacom Inc. ("Viacom").

<sup>7</sup> Comments of Tandy Corporation ("Tandy"); Comments of Circuit City Stores, Inc. ("Circuit City"); Consumer Electronics Retailers Coalition Comments on Notice of Proposed Rulemaking ("CERC"); National Retail Federation Comments on Notice of Proposed Rulemaking ("NFR").

cal standards in the guise of purported “performance rules”; (7) adopt rules initially covering all MVPDs, including OVS and DBS, as the statute contemplates; (8) recognize that in home wiring, network interface units and so-called “residential gateways” are not covered by Section 629; (9) reject proposals calling for compulsory licensing or otherwise impacting proprietary technologies because the Commission lacks jurisdiction to do so; (10) adopt flexible rules for developmental waivers; and (11) refuse to “sunset” any rules implementing Section 629 with respect to particular MVPDs (e.g., DBS) until they are adopted and applied to such MVPDs.

**II. THE COMMENTERS UNANIMOUSLY RECOGNIZE THAT MVPD CONCERNS ABOUT SECURITY AND HARM TO THE NETWORK MUST BE ACCOMMODATED**

“The Commission shall not prescribe regulations under [Section 629] which would jeopardize security of multichannel video programming and other services offered over multichannel video programming systems, or impede the legal rights of a provider of such services to prevent theft of service.”<sup>8</sup> The commenters in this proceeding took this Congressional mandate to heart as they unanimously acknowledge that any rules adopted in this proceeding must recognize the legitimate security concerns of MVPDs. As indicated in our initial comments, theft of cable service is a multi-billion dollar problem today and Congress’s recognition of that problem in the statute cannot be ignored.<sup>9</sup> To that end, we argued that any “right to attach” adopted in this proceeding, must be tempered by an acknowledgment that MVPD networks, particularly the cable

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<sup>8</sup> 47 U.S.C. §549(b).

<sup>9</sup> NCTA at 9. In this regard, we attach to these reply comments a compendium of news reports illustrating the magnitude of this problem.

network, are different from the telephone network which makes direct application of the Carterfone principles inappropriate.

Other commenters echoed NCTA's concerns. General Instrument states the consensus view most succinctly: "[T]he Commission is not authorized to adopt regulations -- even if they would assure commercial availability -- if such regulations also would jeopardize system security."<sup>10</sup> And Scientific-Atlanta describes in detail the differences between the telephone network and the networks used by the cable, DBS and computer industries to demonstrate why the telephone-based "right to attach" may be a good starting point for determining guiding principles in this proceeding but should not be applied directly to navigation devices covered by Section 629.<sup>11</sup> Other CPE manufacturers reflected similar concerns.<sup>12</sup>

As might be expected, MVPDs were the most vehement in urging the Commission to "do no harm" to their network security or integrity. In this regard, a broad range of representatives of

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<sup>10</sup> GI at 56.

<sup>11</sup> S-A at 7-8.

<sup>12</sup> See Zenith at 3, 9 (telephone model not analogous; protection of security should be highest priority); Commercial Eng. at 2, 5-7 (right to attach is subject to caveat of no harm to the network; security concerns must be recognized but not used to delay commercial availability); Motorola at 26-28 (FCC cannot prescribe regulations that will impair an operator's ability to maintain the integrity of its network); Gateway 2000 at 8-9 (claims its distribution model would minimize security risks which it acknowledges are significant); TIA at 11-13, 17 (telephone model is not appropriate for navigation device rules citing differences between systems; FCC "should be extremely careful not to open up new opportunities for theft"); Uniden at 1-2 (supporting right to attach subject to no harm caveat).

the MVPD community, including cable,<sup>13</sup> DBS,<sup>14</sup> and telephone companies,<sup>15</sup> spoke to the security issue with one voice. Representatives of the computer industry also acknowledged this concern.<sup>16</sup>

Commenters representing the views of the consumer electronics retailers and manufacturers also conceded -- as they must -- that Congress's mandate to make navigation devices commercially available was tempered by the directive not to jeopardize security. In this regard, the Consumer Electronics Retailers Coalition ("CERC") recognizes that any "right to connect" cannot require that security capabilities be made "independently" available at retail (i.e., without the local MVPD's consent) because "the system operator could reasonably argue that such a regulation would jeopardize system security and therefore would be inconsistent with Section

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<sup>13</sup> See TWE at 7-10 (protecting signal security must be given the highest priority); 14-15 (differences between the cable and telephone model make Carterfone inappropriate model; there should be no absolute "right to attach"); US WEST at 4-5 (Carterfone inapplicable); 5-8 (security issue important; no unrestricted "right to attach"); Ameritech at 6 (security-related functions may not be jeopardized).

<sup>14</sup> See DirecTV at 16 -18 (agrees with Commission that "failure of access control or security systems will both interfere with incentives to produce programming for the market and ... increase the cost of service to those who do subscribe."); Primestar at 21-22 (FCC must respect security concerns); SBCA at 6-9 ("threat of signal theft is in direct proportion to the decentralization of the CPE components used in signal distribution").

<sup>15</sup> See US WEST at 4-8; Bell Atlantic/NYNEX at 2, 6-8 (recognizes security concerns of Congress and FCC as well as "signal ingress noise" problems; suggests separation as solution); Ameritech at 6; GTE at 2, 6, 8 (FCC rule must not conflict with maintenance of system security).

<sup>16</sup> See Info. Tech. at 24-26 (MVPDs should be permitted to protect the security of their systems, but should be limited to measures essential to that purpose); BSA at ii (FCC should adopt right to attach "subject to restrictions necessary to prevent technical harm to the system, signal leakage, threats to public safety, or theft of service").

629(b).”<sup>17</sup> The Consumer Electronics Manufacturers Association also recognizes that the “legitimate concerns of system providers and equipment manufacturers for the protection of their intellectual property must be respected.”<sup>18</sup> Circuit City and Tandy join in the CERC comments and also recognize in their separate filings that security concerns must be accommodated.<sup>19</sup>

The above review of the comments filed to date demonstrates that the Commission, in crafting rules for the commercial availability of navigation devices, must pay heed to the concerns expressed in this docket by MVPDs, equipment manufacturers, holders of intellectual property rights and others. As described in the following section, that means, with respect to signal security issues, that the Commission’s rules focus on the separation of security from non-security functions, with only the latter being made commercially available. With respect to “harm to the network” issues, the Commission must permit the MVPD to determine how devices available at retail will connect to its network, and it should adopt strict Part 15 certification requirements to assure that consumer CPE causes no harm to the MVPD network.<sup>20</sup>

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<sup>17</sup> CERC at 16, n.10.

<sup>18</sup> CEMA at 17-18.

<sup>19</sup> See Circuit City at 30-33; Tandy at 12 (recognize security concerns but do not permit them to become insurmountable barrier to commercial availability).

<sup>20</sup> See NCTA at 23.

### **III. SEPARATING SECURITY FUNCTIONS FROM NON-SECURITY FUNCTIONS IS AN ACCEPTABLE APPROACH TO MEETING THE TWIN GOALS OF THE ACT**

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In NCTA's initial comments, we said that one solution to reconciling the goals of protecting MVPDs' signal security and making CPE commercially available would be to separate security from non-security functions and make only the latter commercially available.<sup>21</sup> Most commenters accept that such separation is a potential way to resolve the security issues raised in this proceeding. For example, Time Warner states that the "only way to balance the desire to make navigation devices commercially available while still protecting the security of MVPD networks is to separate security functions from non-security functions contained [in] any such devices."<sup>22</sup> Similarly, Zenith asserts that it is "important to isolate the ownership and control of the security function from the consumer and maintain the control with the distribution system."<sup>23</sup>

Others argue that mandating the separation of security from non-security functions is not necessary at this time and that the Commission should only adopt a "performance rule" specifying the dates by which time specified CPE should be made commercially available.<sup>24</sup> The other end of the spectrum is represented by parties who ostensibly wish to limit government involve-

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<sup>21</sup> NCTA at 26.

<sup>22</sup> TWE at 11.

<sup>23</sup> Zenith at 9.

<sup>24</sup> See GI at 50-51; TIA at 11-13; Motorola at 28 ("Any attempt to mandate a particular security solution or impose a standard would expressly contravene [the statute] because it would remove an operator's ability to control security in the manner best suited for its particular system or the type of conditional access method."); Eschelon at 31-33.

ment in standard-setting but who ask the Commission to adopt standards in the guise of a “performance rule.” In this latter category fall CERC, Circuit City and Tandy who not only call upon the Commission to require commercial availability (including portability) by a date certain, but also strongly suggest that the FCC require that commercial availability be achieved through use of particular security interfaces (the decoder interface device for analog CPE and NRSS-compliant devices for digital CPE).<sup>25</sup>

The Commission can fulfill the intent of Congress by concluding that the separation of security from non-security functions in CPE is a solution -- but not the only solution -- to reconciling the mandate for commercial availability with the directive not to jeopardize system security. While NCTA believes that separation of security from non-security is a likely solution, the Commission need not conclude that separation is the only method to achieve Congress’s intended result. The Commission can also adopt a performance rule which mandates the timetables for the commercial availability of various types of CPE covered by Section 629, without specifying how that result must be achieved. In this way, the Congressional mandate will be met in a manner reflecting Congress’s concern that the government inject itself to the minimum extent necessary to achieve commercial availability of navigation devices.

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<sup>25</sup> See CERC at 15-24; Circuit City at 27-28; Tandy at 8-12. We address this argument in Section VIII below.

#### **IV. COMMENTERS ARE UNANIMOUS THAT THE FCC SHOULD NOT SET TECHNICAL STANDARDS IN THIS PROCEEDING**

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If the Commission concludes that separation of security from non-security functions is required to achieve commercial availability, it should adopt the “preferred option” cited in the Notice and rely upon voluntary, industry-generated standards to establish the appropriate interface. In so doing, the Commission would be reflecting the unanimous judgment of the commenters in this proceeding.

As NCTA pointed out in our comments, government-mandated standards are to be avoided because, among other things, they freeze technology and chill innovation.<sup>26</sup> Every commenter who addressed this issue concurred with the Commission that government-mandated standards are to be avoided at all costs. For example, the Ad Hoc Computer Coalition as well as the Information Technology Industry Council expressed strong opposition to FCC-mandated technical standards to achieve commercial availability observing, among other things, that any such standards would be inconsistent with Congress’s intent that the agency defer to private standard-setting bodies.<sup>27</sup>

Similar views were expressed by MVPDs,<sup>28</sup> programmers,<sup>29</sup> and equipment manufacturers.<sup>30</sup> Indeed, General Instrument submitted a compelling report by economists Stanley M.

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<sup>26</sup> NCTA at 31, 37-38.

<sup>27</sup> Ad Hoc at 4-8; Info. Tech at 14-15. See also BSA at 9; Echelon at 11- 31.

<sup>28</sup> See U S WEST at 12-13 (let accredited industry bodies such as SCTE, IEEE develop standards); Ameritech at 10-15 (FCC should convene “industry advisory group” to develop standards); Bell Atlantic/NYNEX at 4 (“The Commission should not dictate any particular standard; instead, it should leave the development and adoption of standards to industry groups and the marketplace”);

Besen and John M. Gale which demonstrated, among other things, that private industry voluntary standard-setting is preferable to government-imposed standards.<sup>31</sup> And even representatives of the consumer electronics industry made clear their preference for “voluntary” industry standards.<sup>32</sup> Although some asked the Commission to impose what most would regard as technical standards in the guise of a “performance rule,”<sup>33</sup> they did so on the premise that private industry had already reached a consensus on the standards which would be included in the “performance rule.”<sup>34</sup>

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PacBell at 6 (supports DAVIC as standard-setting body); TWE at 6, 28-30 (“If the Commission gets involved in mandating which features must be available from competitive retailers on particular navigation devices, it will have created a regulatory mine field from which neither consumers nor equipment manufacturers will escape unscathed.”).

<sup>29</sup> See Americast at 7-8 (FCC should establish industry board to develop standards which FCC can later adopt as rules); Viacom at 12 (adopt rule requiring “universal” and “multichoice” CPE but let industry develop standards for it).

<sup>30</sup> See Uniden at 3 (allow MVPDs to “establish and enforce their own standards on what can be attached to their systems.”); TIA at 4-8 (FCC has no mandate to adopt standards); Zenith at 5 (voluntary standards should be encouraged); Motorola at 9, 10-13, 20-26 (FCC should not adopt standards; let industry “lead” as Congress intended; standards should be market-driven); S-A at 14-15, 29 (let the marketplace decide; performance criteria should not be euphemism for government standards). But see Commercial Eng. at 7 (relying on industry may cause delay).

<sup>31</sup> See Besen and Gale, An Economic Analysis of the Commercial Availability of “Navigation Devices” Used in Multichannel Video Programming Systems, May 16, 1997, at 33-38.

<sup>32</sup> See CEMA at 9 (FCC should encourage adoption by MVPDs and the CE industry of joint industry-wide standards developed through voluntary, industry-led processes); Tandy at 10 (“Tandy’s proposed equipment authorization rule would not require the Commission to adopt specific standards to promote portability”).

<sup>33</sup> See CERC at 15-24.

<sup>34</sup> CERC at 5 (“because the private sector has already accomplished so much, the Commission need not itself engage in, or even closely supervise, standards activity”), 17-18 (NRSS for digital), 20-21

We address below the specific “performance rule” proposed by CERC as well as the equipment authorization rule proposed by Tandy. Suffice it to say at this juncture that the record overwhelmingly supports the Commission’s tentative conclusion to defer to industry standard-setting bodies in determining standards for the separation of security and non-security functions in CPE so that non-security CPE can be made promptly available at retail.

**V. THE RECORD SUPPORTS LIMITING THIS PROCEEDING TO DIGITAL NAVIGATION DEVICES**

Another area of virtual unanimity in the comments concerns the differences between analog and digital CPE. As we stated in our comments,<sup>35</sup> any rules adopted in this proceeding should be limited to digital CPE. Any separation requirement should not apply to cable’s analog set-top box or so-called “hybrid” CPE. By “hybrid” CPE we mean CPE which is capable of receiving digital video signals as well as decoding scrambled analog signals.

In our comments we explained that applying new commercial availability rules to analog CPE would be burdensome, impractical and unnecessary. We noted that there is a huge embedded base of analog set-top boxes throughout the country which would make application of any new rule impossible to apply to the majority of analog equipment. We also observed that analog equipment is very vulnerable to theft of service and making analog CPE available at retail would raise significant security concerns. Moreover, we argued that relatively soon analog CPE will

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(decoder interface for analog); Tandy at 10-11 (private sector already has made considerable progress).

<sup>35</sup> NCTA at 8-14.

be replaced by digital CPE so the utility of considering and adopting rules for analog was limited at best. Finally, we said that, to the extent there were benefits to making new analog CPE commercially available, that is a goal which the Commission's equipment compatibility rulemaking hopes to achieve; the decoder interface device being considered in that proceeding -- or some other solution which may be adopted -- should accommodate the separation of security from non-security functions for analog CPE on a going-forward basis.

Most commenters in this proceeding who addressed the "analog-digital" issue echoed NCTA's concerns. As Scientific-Atlanta concludes: "The retail sale or commercial availability of navigation devices in the analog market is not feasible technically, logistically or economically," citing, among other things, the seventeen or more basic scrambling methods developed by equipment manufacturers as a means of improved security as well as product differentiation.<sup>36</sup> General Instrument makes similar policy arguments as well as concluding that analog equipment is exempt as a matter of law from the Section 629 requirements because the Commission's decisions on the decoder interface in the equipment compatibility rulemaking constitute "prior determinations" which, under Section 629(d)(1), fulfill the requirements of the commercial availability mandate.<sup>37</sup>

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<sup>36</sup> S-A at 12.

<sup>37</sup> GI at 39-40. GI and other equipment manufacturers also argue that analog CPE should not be subject to commercial availability rules for public policy reasons as well. GI at 40-41 (analog about to give way to digital); Zenith at 4, 6, 8, 13 (citing huge embedded base, emerging digital standard); TIA at 9, 14 (huge embedded base, emerging digital standard, difficulty of retroactive application of rule). But see Commercial Eng. at 8 (do not delay rules until digital technology introduced).

It is not only the equipment manufacturers who presented persuasive arguments against applying any rules adopted in this proceeding to analog CPE. The Ad Hoc Computer Coalition whose members include Apple Computer, Netscape Communications, 3Com Corp. and a host of others from the computer and high technology communities, assert that the "Commission should not promulgate any technical standards for commercial availability of analog converters, set-top boxes or other navigation devices [since] [t]his equipment is the last of its generation, and will be replaced over the next decade with digital devices...."<sup>38</sup> Similar sentiments are expressed by MVPDs who are closest to the consumers who are currently using the embedded base of analog CPE and programmers whose programming is more susceptible to piracy from analog CPE.<sup>39</sup>

Even the consumer electronics community acknowledges sub silentio that this proceeding should focus on digital CPE. They do so by arguing that any concerns about analog CPE should

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<sup>38</sup> Ad Hoc at 11. See also Eschelon at 11, 15 ("One thing is certain, all the current technological breakthroughs and product development are focused forward on the new digital environment. Analog is the technology of the past, and it cannot, and should not, survive in a progressive digital world."). But see Info. Tech. at 27 (urging no distinctions between "analog and digital MVPDs" but not necessarily addressing distinctions between analog and digital CPE).

<sup>39</sup> See TWE at 11, 34 (at most, decoder interface should satisfy rules for analog on a going forward basis; any portability or interoperability requirements should apply only to digital); U S WEST at 3-8 ("The high potential for theft of service makes the commercial availability of enhanced analog-only CPE untenable"); Ameritech at 8-10 (focus on digital; "analog segment of the MVPD industry is characterized by the use of multiple access technologies, even within a single distribution architecture," huge embedded base; digital will supplant analog); GTE at 5-7 (huge embedded base); PacBell at 2 (digital will replace analog, "there is no justification for forcing the video industry to incur the significant development and production costs necessary to develop standardized, commercially available navigation devices for analog systems"); Viacom at 3 (vast number of deployed analog boxes), 14 ("the only way to control piracy of today's analog set-top boxes is to control access to the boxes themselves").

be accommodated through adoption of the decoder interface device.<sup>40</sup> As we observed in our comments, use of the decoder interface device or any other solution arising out of the equipment compatibility rulemaking or private industry efforts or both should satisfy any commercial availability requirements for analog CPE on a going forward basis.<sup>41</sup> For the reasons we and others have stated, the Commission should focus this proceeding on rules applicable to digital -- not analog -- CPE. To the extent it considers analog CPE, it should only do so by requiring compliance with the decoder interface standard, while recognizing that litigation spawned by such a decision may not be resolved until we are well into the digital era.

**VI. MVPDs SHOULD BE PERMITTED TO PROVIDE INTEGRATED CPE WITH BOTH SECURITY AND NON-SECURITY FUNCTIONS**

In our comments, we observed that, as a general matter, security is best provided by an MVPD on an integrated, rather than a separated, basis. We noted that integrated circuitry benefits consumers by lowering costs, permitting them to lease rather than purchase CPE and paves the way for the introduction of new services such as program guides. In support of our position that MVPDs should be permitted to provide integrated boxes after CPE with non-security func-

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<sup>40</sup> See CERC at 20-24; Circuit City at 33; Tandy at 13; CEMA at 5.

<sup>41</sup> A number of parties have argued that, as a legal matter, the decoder interface cannot be adopted by the Commission to satisfy its mandate in the equipment compatibility proceeding or in this proceeding, either as a solution to the analog CPE issue or as a model for digital CPE. See Eschelon at 40-47, 33-39; Ad Hoc at 14-19; S-A at 13, 26. Others do not address the legal issue but opine that the decoder interface was designed for the analog world and would limit product differentiation in the digital world. Ameritech at 17; S-A at 26. Even if these arguments were valid, they would militate in favor of the Commission applying its commercial availability rules to only digital CPE because, at most, the decoder interface "solution" is only practical to resolve the analog issue on a going forward basis.

tions is made commercially available, we cited the Commission decision in the equipment compatibility rulemaking where it permitted cable operators to incorporate signal access control functions in multi-function component devices that will connect to the Decoder Interface connector.<sup>42</sup>

A number of parties take issue with the view that MVPDs should be permitted to provide integrated CPE after CPE with non-security functions is made commercially available.<sup>43</sup> When they do anything more than assert a conclusion,<sup>44</sup> they essentially make the same argument in a variety of ways: permitting MVPDs to provide integrated boxes would (1) result in “consumers remain[ing] captive customers of the entity controlling the security function and the retail market for navigation devices would not flourish”<sup>45</sup>; (2) “establish[] a new monopoly with which no independent manufacturer or retailer could compete” and “in the long term it would be grossly

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<sup>42</sup> NCTA at 28-29, citing Memorandum Opinion and Order in ET Docket No. 93-7, 11 FCC Rcd 4121, 4127(1996).

<sup>43</sup> See Info. Tech. at 24-25 (no “bundling” of security devices and non-security devices); CERC at 18, n.12 (MVPD should not be able to supply non-security and security circuitry); Circuit City at 32 (no MVPD-supplied integrated boxes; would recreate “monopoly”); Tandy at 13 (same); CEMA at 16-17 (rules should prescribe safeguards to prevent system providers from packaging security and non-security devices “in a way that places other CPE manufacturers at a technical disadvantage”).

<sup>44</sup> For example, the Information Technology Industry Council merely asserts that bundling of security and non-security should be prohibited, but in the same section of its comments states that any rules should “take into account manufacturers’ need for flexibility and they should be designed, to the extent possible, to minimize additional equipment and component costs for manufacturers and consumers.” Info. Tech. at 24-25. CEMA asks for safeguards but not an absolute ban on “bundling” yet says they too must “minimize increases in equipment costs.” CEMA at 16. As we discuss above, prohibiting MVPDs from providing integrated boxes will increase costs for both manufacturers and consumers.

<sup>45</sup> Tandy at 13.

inefficient, as it would frustrate integration in consumer-owned devices of the ability to access competing systems”<sup>46</sup>; and (3) allow “embedded security to be used to tie other functions and features with proprietary local system attributes, and prevent their long-term more efficient integration into standard computer and consumer electronics hardware and software applications.”<sup>47</sup>

These claims are without merit and they ignore the effect on the consumer of the anti-bundling rule these commenters propose.

First, the idea that permitting an MVPD to provide integrated CPE would result in “captive customers” is simply not the case. With independent manufacturers and vendors permitted to provide non-security CPE that is compatible with the MVPD’s security CPE, the consumer will have a choice of providers for the non-security CPE. If those unaffiliated providers produce non-security CPE with features and functions that consumers desire, the MVPD’s customers will purchase that CPE because they need not obtain it from the MVPD. They will not be “captive customers” of the MVPD for non-security CPE.

Nor would MVPDs have the incentive or the ability to act anti-competitively if they can provide integrated boxes. As Besen and Gale discuss in their appendix to the General Instrument comments, MVPD provision of integrated boxes “will not inhibit the availability of features boxes through other outlets so long as cable operators continue to offer security-only

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<sup>46</sup> Circuit City at 32.

<sup>47</sup> CERC at 18, n.12.

boxes and provide interface information to those who desire to make compatible features boxes.”<sup>48</sup>

Second, the retailers’ argument focuses on the perceived effect on them, not on consumers, the intended beneficiaries of the commercial availability provisions. Since independent providers as well as MVPDs will be able to provide their own feature-rich non-security CPE (as long as MVPDs do not violate the statute’s anti-subsidy provisions), there is no reason to prohibit MVPDs from combining security and non-security CPE and passing on whatever economies result to the consumer. Time Warner makes this point in its comments: “As long as consumers have the option to purchase or lease component devices, there is no reason they should not also have the option to obtain an integrated device from their MVPD,” noting that “the integration of various functions onto a single silicon chip will be a key factor in reducing the cost of producing advanced digital equipment and overcoming consumer resistance to the purchase of such equipment.”<sup>49</sup>

As Besen and Gale conclude, operators should be permitted to provide integrated boxes because “there may be efficiencies, in both improved security and lower costs, from combining security and features in a single box. These efficiencies would be lost if the operator were pre-

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<sup>48</sup> Besen and Gale at 18, citing M.D. Whinston, “Tying, Foreclosure, and Exclusion,” American Economic Review, 80, 837-859 (1990).

<sup>49</sup> TWE at 30 (emphasis in original). Viacom suggests that MVPDs should be permitted to provide integrated CPE as long as the MVPD informs the consumer of the limitations of such CPE and the option to purchase compatible CPE in area retail outlets. Viacom at 13.

vented from offering integrated boxes in addition to separate security boxes.”<sup>50</sup> If the market produces feature-rich non-security CPE that is superior to the features and functions available with MVPD CPE, consumers will flock to the CPE provided by the independent providers. Contrary to the claims of some commenters, no “new monopoly” will be created for the MVPD if the non-security features and functions included in its CPE (even its integrated CPE) cannot meet the test of the marketplace.

Third, independent providers of non-security CPE address the wrong issue when they say that the provision by an MVPD of integrated boxes including features and functions as well as security would “prevent [the] long-term integration” of such features and functions into commercially available CPE and software. The issue is not whether an MVPD can develop proprietary features and functions that it can make available in its CPE whether integrated with security or not. Nor is the issue whether independent providers of CPE are entitled to include proprietary features and functions of an MVPD in its commercially available CPE. The real question is whether the consumer will be able to access those MVPD features, functions and applications through any commercially available CPE. NCTA, Time Warner, Ameritech, and PacBell made this point in the initial comment round.<sup>51</sup> Therefore, any separations standard adopted as a result

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<sup>50</sup> Besen and Gale at 17.

<sup>51</sup> NCTA at 29-30; TWE at 42 (“[A]ny cable ready digital navigation device should establish a common integrated hardware platform that would allow functional applications which complement traditional MVPD offerings to be downloaded and executed directly.”); Ameritech at 6, n.6 (“[C]ommercially available equipment should not be permitted to inhibit the operation of MVPD network features which rely on certain set-top functionalities.”); PacBell at 3 (“[I]t is important that commercially available hardware that accepts smart cards, other proprietary hardware, and

of this proceeding must assure that the MVPD can control and pass through any of its services (e.g., program guides, pay-per-view options, enhanced television applications) to the consumer. Under this approach, commercially available CPE should have a common integrated hardware platform to permit MVPDs to download to and execute applications in that CPE to support the MVPD's features and services on a transparent basis.

For the above reasons, and because the statute does not require it to do so, the Commission should not prohibit an MVPD from providing integrated CPE containing both security and non-security functions.

**VII. SINCE NEITHER PORTABILITY NOR INTEROPERABILITY ARE REQUIRED BY THE STATUTE, THE FCC SHOULD REFRAIN FROM SETTING STANDARDS IN THOSE AREAS**

While Section 629 does not by its terms require that CPE be either "portable" or "interoperable," the proposals of a number of commenters reflect the belief that the Commission should require portability or interoperability of CPE in implementing the statute. In particular, CERC asks the Commission to require "national portability,"<sup>52</sup> while Tandy urges that all CPE be "portable to all similar networks" of MVPDs "in every geographic location where such service is offered."<sup>53</sup> Circuit City concludes that "'commercial availability' means that navigation devices must be nationally portable, either across a national MVPD system (e.g., DBS) or across similar

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applications software, not preclude the use of any operating system a video provider might choose.").

<sup>52</sup> CERC at 7-15.

<sup>53</sup> Tandy at 9-10.

local MVPD systems (e.g., cable-to-cable) nationwide.”<sup>54</sup> Viacom asks the Commission to adopt rules for the commercial availability of “universal, multi-choice” digital set-top boxes, which assumes that such CPE would be portable as well as interoperable.<sup>55</sup>

Despite these expressions of support for Commission action on portability or interoperability, a clear majority of commenters urge the Commission not to address those issues in this proceeding, or, if it is to do so, only to adopt rules encouraging industry action without specific technical or other requirements. All parties -- including the commenters cited in the previous paragraph -- recognize that the FCC should rely on industry standards-setting bodies if it addresses the portability or interoperability issues at all.

In this regard, Time Warner, as did NCTA, indicates its support for continued industry efforts to improve video equipment portability and interoperability, observing that those efforts will be “fueled by marketplace demands.”<sup>56</sup> But as Time Warner also points out, “nothing in Section 629 or elsewhere in the Communications Act gives the Commission the authority to mandate the portability or interoperability of any video equipment.”<sup>57</sup> Moreover, to the extent the FCC could require portability or interoperability, the statute’s explicit direction that the FCC

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<sup>54</sup> Circuit City at 4, 24-28.

<sup>55</sup> Viacom at 6-11.

<sup>56</sup> TWE at 33.

<sup>57</sup> Id. at 36-38 (emphasis in original). See also Primestar at 14 (interoperability not required by statute); Eschelon at 24-28 (statute does not require “portability”); TIA at 16 (no requirement for portability or interoperability); GI at 29-30 (same).

rely on “appropriate industry standards-setting organizations”<sup>58</sup> requires that the Commission refrain from imposing portability or interoperability standards in this proceeding. For this reason, General Instrument, Ameritech and U S WEST urge the Commission to defer to industry standards-setting organizations, as Congress intended.<sup>59</sup>

Moreover, as Time Warner states, because “different cable systems operating in different environments utilize different bandwidth, security technologies, system architectures and offer widely varying services and service packages,”<sup>60</sup> imposing portability rules and standards on the cable industry will chill innovation and raise subscriber costs.<sup>61</sup> DirecTV makes the same case for DBS in its comments.<sup>62</sup> In addition, GTE notes that the standards necessary for portability or interoperability do not exist so that it is impossible to evaluate, in terms of cost, whether portability or interoperability should be required.<sup>63</sup> Even the Consumer Electronics Manufacturers Association, which believes portability standards are “absolutely necessary if the consumer’s right to attach is to be meaningful,” asserts that such standards “should be developed through voluntary, industry-led processes” with the FCC merely “encourag[ing] adoption by MVPDs and

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<sup>58</sup> 47 U.S.C. §549(a).

<sup>59</sup> GI at 30-34; Ameritech at 10-13; U S WEST at 12-13.

<sup>60</sup> TWE at 36.

<sup>61</sup> Scientific-Atlanta makes a similar argument. S-A at 19-22.

<sup>62</sup> DirecTV at 15-16.

<sup>63</sup> GTE at 8.

the CE industry of joint, industry-wide standards that will be needed to allow the marketing of interoperable, portable navigation devices nationwide.”<sup>64</sup>

Finally, a number of manufacturers make a compelling case for FCC forbearance from involvement in portability or interoperability requirements, citing practical difficulties with requiring either at this juncture and other problems.<sup>65</sup> For example, Scientific-Atlantic concludes: “A federal government imposed interoperability or portability requirement would not work for DBS, MMDS or today’s cable systems.”<sup>66</sup> And General Instrument, citing to the Besen and Gale analysis, cogently argues that (1) “portability and interoperability are not necessary to ensure the development of a vibrant retail equipment market,” (2) “there are significant consumer benefits associated with diversified navigation devices that are customized for particular systems,” (3) “mandated equipment portability and/or interoperability could substantially increase consumer costs,” and (4) “marketplace forces and industry efforts already are driving such outcomes where they are economically feasible and pro-consumer.”<sup>67</sup>

As noted earlier, even the commenters proposing that the FCC adopt purported “performance rules” some of which, in fact, embody technical standards, claim that they are not seeking FCC selection of standards but only the agency’s endorsement of standards already adopted by

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<sup>64</sup> CEMA at 8-9.

<sup>65</sup> See Motorola at 16-19; Zenith at 16-19; TIA at 16 (defining standards would be unfair to new entrants).

<sup>66</sup> S-A at 19.

<sup>67</sup> GI at 34-38.