

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)	
)	CS Docket No. 97-80
Implementation of Section 304 of the)	
Telecommunications Act of 1996)	
)	
Commercial Availability of Navigation Devices)	
)	
Compatibility Between Cable Systems and)	PP Docket No. 00-67
Consumer Electronics Equipment)	
)	

COMMENTS OF PUBLIC KNOWLEDGE AND CONSUMERS UNION

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February 13, 2004

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Comments of Public Knowledge and Consumers Union

Public Knowledge and Consumers Union (hereafter “Consumer Groups”) hereby submit these comments in connection with the Commission’s *Second Further Notice of Proposed Rulemaking*, FCC No. 03-225 (released October 9, 2003) (“*SFNPRM*”) in the above-captioned proceeding.¹

I. INTRODUCTION AND SUMMARY

We note at the outset that the Commission has sought to keep its rulemaking in this arena

¹ The two groups that are submitting these comments each play a unique role in advocating and protecting citizen interests as they may be affected by changes in technology policy and regulation. Public Knowledge is a nonprofit advocacy and educational organization that seeks to address the public's stake in the convergence of communications policy and intellectual property law. Consumers Union, publisher of Consumer Reports, is an independent, nonprofit testing and information organization serving only consumers. Its advocacy offices and the Consumer Policy Institute address the crucial task of influencing policy that affects consumers.

narrowly tailored, both to harness “marketplace forces”² and to avoid changing or affecting existing copyright law.³ The Consumer Groups believe such a minimalist approach to regulating in the MVPD arena is generally the right approach, with some notable exceptions; our comments below expand on what we believe is the right way to continue to regulate in this arena consistent with allowing marketplace evolution and efficiencies to operate.

First of all, we oppose the implementation of “down-resolution” (“downrezzing”) measures either as a content-protection approach or as a means of promoting the “retirement” of analog outputs. At the same time, we argue that, due to the increased complexity of the consumer-electronics market attributable to mandatory or licensing-related content-protection technologies, the Commission must take extra steps to ensure that the marketplace remains fully informed about the use limitations and compatibility issues that may be associated with these technologies. We also believe the Commission can play an important role by mandating that new content-protection technologies be interoperable with existing approved technologies, and by opposing licensing restrictions that might bar interoperability. Ensuring that consumers have complete information about these compatibility and use issues, together with ensuring that content-protection technologies serve rather than inhibit interoperability among devices, will

² “It is our belief that once a baseline compatibility standard has been set, marketplace forces are best suited to decide which products and services will meet consumers’ needs and interests.” In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; and Compatibility Between Cable Systems and Consumer Electronics Equipment, CS Docket No. 97-80, PP Docket No. 00-67, *Second Report and Order and Second Further Notice of Proposed Rulemaking*, FCC 03-225 at ¶ 29 (October 9, 2003) [hereinafter *Second Report and Order and SFNPRM*].

³ The Consumer Groups believe that the imposition of content-protection technologies, either as a Commission mandate or as a function of private licensing agreements, necessarily has an impact on existing copyright law. To the extent that the Commission has started down the road of approving content-protection technologies, therefore, it has inextricably entangled itself in copyright law and policy, despite its statements to the contrary. We understand, of course, that the Commission has *endeavored* to avoid any effect on copyright law of its rulemaking in the digital-television arena. Those efforts, even though we regard them as necessarily doomed to failure because of the inherent connection between copyright law and technological restrictions on copying content, inform our comments here.

ameliorate any marketplace confusion or disappointment that may result from imposing content-protection technologies.

The Consumer Groups further argue that the Commission must act to ensure that content-protection technologies be approved according to neutral functional criteria developed (and perhaps applied) by neutral standards bodies. We further argue that the marketplace is best served if one of these functional criteria *simply is* interoperability with existing approved content-protection technologies, and that the Commission must ensure that interoperability is not hindered by licensing restrictions. Furthermore, we argue, the Commission can reduce uncertainty in the marketplace by limiting the revocation of breached content technologies to prevent “orphaning” of consumer devices.

Finally, Consumer Groups argue here, as we do in the broadcast-flag proceeding, that the Commission should not combine the broadcast-flag and plug-and-play rulemakings, since the underlying policy frameworks supporting each rulemaking are fundamentally different.

II. THE COMMISSION SHOULD NOT APPROVE “DOWNREZZING” EITHER IN ITSELF OR AS A MEANS OF PROMOTING THE “RETIREMENT” OF ANALOG CONNECTORS.

Given that the Commission has sought in its rule-making to promote marketplace competition and a “level playing field” in protection technologies or in content-distribution models, it is unclear why the Commission should go forward in an attempt to promote the “retirement” of analog connectors, especially given their widespread, almost universal use in legacy televisions and other home-entertainment devices, and their allowance in the current plug-and-play and broadcast-flag regimes. If digital connections among home-entertainment devices

truly are superior, the marketplace will need no help from the Commission in discovering that superiority. If they are not superior to analog connections, then any rulemaking that sets out to discourage analog connectivity will seriously distort the marketplace.

We note that the perceived need to encourage the abandonment (or “retirement”) of analog outputs has been at the heart of at least one argument for “downrezzing” (reducing the content’s picture resolution) digital-television content directed to analog outputs. Implementing “downrezzing” for such a reason would be an instance of industrial policy that is not justified by the scope of the Commission’s role in this proceeding. Instead it is simply a part of content companies’ “wish list” to transform the consumer-electronics marketplace into something they believe is more controllable. Granting this particular wish would be an inappropriate application of Commission authority, and would actively do harm in the consumer marketplace by making existing DTVs less functional over time (because existing DTV sets commonly use analog interfaces) and, ultimately, by increasing consumer expense as consumers transition to digitally-originating television. Disappointments associated with “downrezzing” will discourage some consumers from integrating DTV sets into their existing home entertainment systems, which frequently rely on analog connections.

Moreover, we believe that “downrezzing” for any purpose should be disfavored by the Commission across the board, primarily because consumers will tend not to purchase technologies that deliberately reduce quality of the presentation of television content. In addition, we find the reasoning offered by proponents of “downrezzing” to be logically incoherent. The theory is that, by reducing the quality of an output, one can simultaneously please the consumer by allowing at least some degree of copying of content while ensuring that the copies are of

sufficiently lower quality so that they will not compete, licitly or illicitly, with the higher-definition content from which the copies were derived. We believe this is an inherently inconsistent pair of requirements. Either “downrezzing” noticeably reduces the quality of video content or it does not. If the former, then consumers will not be satisfied by devices that inherently and noticeably degrade outputs. If the latter – that is, if the lowered resolution is unnoticeable or at least not bothersome – this raises the question of why any content owner should insist on “downrezzing.”

Furthermore, “downrezzing” undermines the single most effective factor that prevents Internet infringement of HDTV content both currently and in the foreseeable future. To wit, it reduces the file sizes of the “downrezzed” content to “mere” DVD quality. While DVD quality content is itself too large for any significant transmission of it, in full resolution, over today’s or tomorrow’s Internet,⁴ it is also smaller, often by a factor of four or more, than full 1080i high-resolution content. Even if we were to believe that Internet-based infringement of digital TV content is a threat, we would not think it prudent to “protect” content owners by making their content four times easier to copy and retransmit. In any case, if “downrezzing” for any MPVD business model is implemented in a wide range of consumer devices, and if it does in fact cause a noticeable lowering in quality of the content, we may reasonably predict that consumers will be reluctant to adopt devices that include such features and that this reluctance will tend to slow consumer adoption of digital TV products generally.

⁴ In our research into the downloading of Internet content that has been “ripped” from commercial DVDs, the resolution of the content is commonly reduced to one fourth its original dimensions. Unreduced DVD-originating content also can be found, but the file sizes of this content are typically four or more gigabytes in size, making them impractical for downloading over home broadband connections.

III. THE COMMISSION SHOULD INSIST THAT CONTENT PROTECTION TECHNOLOGIES UNDER THE PLUG-AND-PLAY REGIME SHOULD BE INTEROPERABLE WITH ONE ANOTHER

The focus of this proceeding has been the Commission's commitment to create a competitive market for navigation devices and to ensure interoperability of MVPD products and consumer electronics such as digital television receivers and equipment. These core goals have led the Commission to consider questions of standardization, labeling, unauthorized access, redistribution and copying of content and related technical and compatibility issues.⁵ Even though these related issues to some extent expand the complexity of the Commission's regulations, the ultimate goals of flexibility and interoperability in the cable and consumer-electronic marketplaces should remain central to any future and permanent regulations and procedures.

In the long term, we believe, these ultimate goals are best served by the Commission's insistence that, to be approved, new content-protection technologies must be interoperable with other approved technologies. Such a rule would prevent consumers from "lock in" with regard to a particular set of DTV-related technologies; it would allow consumers to buy new products with new content-protection technologies (and new features and functionalities) without having to sacrifice their original investment in the conversion to digital television. The only limitation on this general rule should be that there is no requirement that new content-protection technologies (which may be, but won't necessarily be, associated with new types of hardware

⁵ *Second Report and Order and SFNPRM* ¶ 4.

connectors) interoperate with content-protection technologies or connection technologies that have been “revoked” under this scheme.⁶

PK and CU further believe that the Commission must supervise the licenses of approved content-protection technologies so that interoperability among protection technologies is not hindered by licensing restrictions.

IV. THE COMMISSION SHOULD REQUIRE LABELING AND/OR OTHER MEASURES TO INFORM CONSUMERS PRIOR TO SALE ABOUT THE LIMITATIONS ON, AND FEATURES OF, “DIGITAL CABLE READY” DEVICES THAT INCLUDE CONTENT-PROTECTION TECHNOLOGIES.

Presale information about mandated protection technologies and about constraints on functionality of DTV-related equipment should be maximized. There is immense potential for consumers to be confused in the marketplace absent pre-sale information about which technologies are being used, which are incompatible with others, and the degree to which consumer expectations will have to change from what has come to be expected in the analog-television environment. We believe that much of this information should be imparted in the form of labels on the actual products – while we are not averse to incorporating the same or more detailed information in separate pre- and post-sale materials as well, experience suggests that a large percentage of consumers either misplace that information over time or fail to take advantage of it in the first place. Since new equipment purchases over time are central to advancing the DTV transition, questions of incompatibility and of limits on functionality are going to continue to arise in the marketplace. Since the Commission has put in place a scheme that will require the use of content-protection technologies to implement certain business models,

⁶ We discuss our recommended approach to “revocation” in Section VI., below.

it follows that the Commission should take the initiative in ensuring that the consumer public is properly educated about the consequences of these choices in the plug-and-play world.

We recognize that some may object that a pre-sale labeling requirement, or any similar consumer-information measure of the sort we discuss here, may itself generate some degree of marketplace confusion and uncertainty. We don't mean to dismiss such arguments out of hand, but we note that consumers generally are more satisfied with their purchases of consumer-electronics equipment if they are aware of the limitations and restrictions on such equipment *at the time of sale*; even if labeling or any similar consumer-education measure poses some risk of confusion, we believe, the fact that the confusion occurs pre-sale tends to promote informational dialog between consumers and retailers. (To put it more simply, if a consumer sees a label he or she doesn't understand, the consumer can ask the salesman about its significance and get an informed explanation before committing to a commercial transaction.) We note also that, in an era in which an increasing percentage of consumer-electronics devices are sold online, providing complete information about these products prior to the sale is even more essential, since many consumers find it daunting to return unsatisfactory devices through shipping services or the mail. A better rule is to ensure that consumers get the fullest possible information at the outset of the commercial transaction.

V. THE COMMISSION SHOULD ENSURE THAT APPROVAL OF NEW CONNECTION TECHNOLOGIES AND CONTENT PROTECTION TECHNOLOGIES BE CONDUCTED ACCORDING TO NEUTRAL FUNCTIONAL CRITERIA DEVELOPED BY NEUTRAL STANDARDS BODIES.

The Consumer Groups believe that the approval of new connectors and protection technologies should not be left to CableLabs, which is a private research entity and not an open

standards body. We further believe that assessment of new connectors and protection technologies should be based on the application of objective criteria. The “functional criteria” approach suggested by Microsoft and Hewlett-Packard in their ex-parte filing in this proceeding⁷ suggest the right approach to defining objective criteria. Ideally, such criteria should be developed in consultation with existing standards bodies, which may also play a role in testing and approval. We believe consumer representatives should be considered as well.

Ultimately, we believe that approved protection technologies either should be open or should be licensable on a reasonable and nondiscriminatory basis (RAND), and that this licensing approach should be enforced by the Commission. The Consumer Groups further believe that the Commission should seek in conjunction with other stakeholders a set of qualified third parties to develop an approval process for new connectors and technologies.

VI. REVOCATION OF “COMPROMISED” CONTENT-PROTECTION TECHNOLOGIES SHOULD BE IMPLEMENTED ONLY WHEN THERE IS SUBSTANTIAL PROOF THAT THE COMPROMISE IS RESULTING IN SIGNIFICANT HARM, AND SHOULD BE IMPLEMENTED ONLY ON A GOING-FORWARD BASIS.

The Commission correctly recognizes that content-protection technologies that appear to be secure today may be breached or circumvented tomorrow⁸. Nevertheless, not every instance of a “compromised” protection technology necessitates the abandonment of that technology. The lesson of DVD content protection measures is instructive; CSS (the “Content Scramble System” used on many commercial DVDs) was broken years ago by a computer programmer in

⁷ See Microsoft and Hewlett-Packard Joint Ex Parte Filing, CS Docket No. 97-80, PP Docket No. 00-67, August 8, 2003.

⁸ *Second Report and Order and SFNPRM* ¶ 86.

Norway, yet CSS has not been abandoned by content producers, and DVD sales have continued to climb. Clearly, despite the flaws uncovered in the Content Scramble System and the development of ways of circumventing that system, the compromise of CSS has led to no significant economic harm; if it had done so, content makers would have abandoned this system altogether rather than continue to use it on newly issued DVDs.

Should a content-protection system approved for “plug-and-play” implementation be determined by the Commission to have been compromised in a way that does lead to significant economic harm, the Consumer Groups argue that the revocation of a content-protection system or technology occur only on a going-forward basis – that is, that it the revocation simply prevent the use of this technology in new devices without “breaking” or rendering nonfunctional existing devices in the field.

VII. THE COMMISSION SHOULD NOT COMBINE THE PLUG-AND-PLAY AND BROADCAST-FLAG PROCEEDINGS.

The Consumer Groups believe the underlying concerns governing selection of content protection technologies are fundamentally different between the MVPD environment and the broadcast environment. First, MVPDs face signal-theft/service-theft problems that don’t occur in the world of free over-the-air broadcasting; these problems lie at the root of the Commission’s earlier decision to allow some degree of linkage between content-protection schemes and access-control technologies in the MVPD world.⁹ These considerations are wholly absent in the broadcast-television context, since viewers of broadcast television cannot be said to be even

⁹ See In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Federal Communications Commission Further Notice of Proposed Rulemaking and Declaratory Ruling, FCC 00-341 (Sept. 18, 2000).

capable of “signal theft;” by regulation and almost by definition the signal they receive is free. Unlike cable and satellite TV, which viewers pay for, broadcast television is delivered free for viewers who have no contractual relationship with the content providers

Second, the Commission’s stewardship over broadcast television is a unique responsibility. Because the stewardship of the airwaves as a public resource entails considerations about promoting diversity and quality of content that the mere supervision of standard-setting in the cable and satellite world does not, the content-protection technologies may have different parameters (e.g., allowing for more flexible home uses) than those for cable and satellite services.

Ultimately, “leveling the playing field” between MVPDs and broadcast television with regards to content protection technology could cause the broadcast audience to value broadcast television less, which in turn would trigger further migration of broadcast viewers to MVPD services. In effect, “leveling the playing field” by imposing on broadcast audiences the same content-protection technologies as those imposed on MVPD subscribers runs the risk of ending broadcast television as we know it.

VIII. CONCLUSION

The Consumer Groups take seriously the Commission’s declared intentions both to regulate as narrowly as possible and to promote a healthy marketplace both for protection technologies and for cable-ready consumer-electronics products generally. Although we continue to have reservations about particular choices the Commission has already made in this proceeding, we also believe the Commission still has significant opportunities to promote a

healthier marketplace in DTV-related products for MVPD subscribers. Some of those opportunities involve forbearing to impose ill-conceived measures and policies such as approving “downrezzing” for some business models or attempting to accelerate the “retirement” of analog connectors. Others involve ensuring that consumers are fully informed about the limitations on the DTV products they buy, as well as ensuring that the content-protection technologies among the devices they do invest in remain as interoperable as possible. ***If the Commission adopts neutral functional criteria for content-protection technologies, these criteria can help promote interoperability among consumer devices, which in turn will limit or reduce the cost to consumers of transitioning to digital television.***

Finally, we ask once again that the Commission not yield to the temptation to combine the broadcast-flag and plug-and-play proceedings. We understand that temptation -- on the surface, the two proceedings raise similar issues of technology policy. At a deeper level, however, the Commission’s stewardship of the airwaves as a unique public resource requires that it not conflate its longstanding policies relating to the development of broadcast television with its essentially “gap-filling” role regarding agreements between MVPDs and the consumer-electronics industry. Broadcasting is far more central to the Commission’s mission as an agency, and one cannot and should not assume that measures that are good or necessary for MVPDs and manufacturers in conducting their private enterprises necessarily add up to good policy for broadcast television and its public-interest-centered obligation to serve its audience.

Respectfully Submitted,

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