

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

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

REPLY COMMENTS OF VERIZON

Michael E. Glover
Of Counsel

Edward Shakin
William H. Johnson
VERIZON
1320 North Courthouse Road
Ninth Floor
Arlington, Virginia 22201

June 28, 2010

Attorneys for Verizon

TABLE OF CONTENTS

	Page
I. INTRODUCTION AND SUMMARY	1
II. THE RECORD CONFIRMS THAT THE COMMISSION SHOULD TURN AWAY FROM IMPOSING TECHNOLOGY MANDATES AND REMOVE EXISTING OUTMODED REQUIREMENTS	2
A. As Evidenced by the Record, Ongoing, Consumer-Driven Marketplace Developments Will Better Meet the Requirements of Section 629 Than Any Technology Mandate Could.....	3
B. The Commission Should Not Take Further Steps to Entrench CableCARDS.....	4
C. The Record Demonstrates Broad Consensus for the Permanent Removal of Existing Outmoded Requirements Like the 1394 Interface and the Avoidance of Any Interface Mandates.	6
III. CONCLUSION.....	11

I. INTRODUCTION AND SUMMARY

The Commission has already recognized the shortcomings of the CableCARD regime and determined that it represents a largely failed experiment. As Verizon explained in its opening comments, the development of more effective, market-based solutions are already well underway, and the Commission should learn from its experience with CableCARDs that mandating the use of particular technologies does not work. Instead of requiring providers to divert time, money, and resources towards supporting dying technologies, the Commission should encourage the ongoing consumer-driven marketplace developments that will ultimately achieve the goals of Section 629 in ways that technology mandates could not.

The record in this proceeding demonstrates that this is the correct approach. Through ongoing, open industry standards-setting work, the marketplace shows signs of convergence and a shift to Internet Protocol (IP) as a *de facto* standard for the transmission of data between devices without regulatory intervention. In light of this progress, the record confirms that the Commission should not further entrench CableCARDs, which have gained little consumer interest. In this vein, even if the Commission had specific authority to impose its pricing and billing proposal, which it does not, a number of commenters agree that doing so would likely cause a great deal of confusion and frustration for the vast majority of consumers who lease their boxes from their video provider. As such, the record confirms that the Commission should not adopt

the rules proposed in the *FNPRM*¹ and should turn away from the failed approach of technology mandates.

Moreover, there is broad consensus among commenters that the Commission should take this opportunity to remove permanently the existing 1394 interface requirement. The 1394 interface is a costly digital output that by Commission rule must be included in all high-definition set-top boxes despite strong consumer preference for other home networking standards. Indeed, recognizing that “IP has overwhelming marketplace support and serves the same purpose that the IEEE 1394 connection is intended to serve”² the Media Bureau recently granted an interim waiver of the 1394 requirement. For the same reasons, and in order to achieve the consumer benefits intended by that waiver, the Commission should permanently eliminate this rule.

II. THE RECORD CONFIRMS THAT THE COMMISSION SHOULD TURN AWAY FROM IMPOSING TECHNOLOGY MANDATES AND REMOVE EXISTING OUTMODED REQUIREMENTS.

As Verizon stated in its initial comments, the Commission should avoid the failures of the CableCARD regime going forward by turning away from the approach of imposing technology mandates, and should instead encourage market-based solutions that follow consumer demand, and remove existing, outdated requirements. Numerous commenters urge the Commission to recognize the tremendous innovation and competition in the video marketplace, eliminate existing, outdated requirements, and

¹ *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility Between Cable Systems and Consumer Electronics Equipment*, Fourth Further Notice of Proposed Rulemaking, 25 FCC Rcd 4303 (2010) (“*FNPRM*”).

² *Intel Corporation, Motorola, Inc., Tivo, Inc., Requests for Waiver of Section 76.640(b)(4)(ii) of the Commission’s Rules*, Memorandum Opinion and Order, CSR-8229-Z, CSR-8251-A, CSR-8252-Z, DA 10-1094 (rel. Jun. 18, 2010) (“*1394 Waiver Order*”).

avoid imposing new ones.³ By encouraging consumer-driven, market-based solutions, the Commission will enhance consumer choice in navigation devices. As Time Warner Cable noted, “experience has proven that the Commission will better serve the goals of Section 629 by permitting flexibility rather than prescribing specific technical requirements.”⁴

A. As Evidenced by the Record, Ongoing, Consumer-Driven Marketplace Developments Will Better Meet the Requirements of Section 629 Than Any Technology Mandate Could.

The record is replete with examples of innovative, consumer-driven marketplace developments already well underway that will better meet the requirements of Section 629 than any technology mandate could. For example, to remain competitive, video providers are working towards making video content available on a myriad of devices, not simply set-top boxes.⁵ Additionally, through open industry standards-setting bodies that do not create artificial and costly proprietary barriers, much progress is being made toward the development of technology-agnostic solutions. For instance, Multimedia over Coax Alliance (“MoCA”), an open consortium of technology companies, including cable, satellite, and IPTV video providers and manufacturers, is developing a home networking standard through specifications for physical layer carriage of Ethernet over coaxial

³ See, e.g., Comments of U.S. Chamber of Commerce, CS Docket 97-80, PP Docket 00-67 at 1-2 (filed Jun. 14, 2010) (“U.S. Chamber Comments”); Comments of Time Warner Cable, Inc., CS Docket 97-80, PP Docket 00-67 at 2 (filed Jun. 14, 2010) (“Time Warner Cable Comments”); Comments of the Telecommunications Industry Association, CS Docket 97-80, PP Docket 00-67 at 3 (filed Jun. 14, 2010) (“TIA Comments”) (urging the FCC to “avoid technology mandates, which undermine investment incentives and chill innovation by forcing providers to deploy least-common denominator solutions.”).

⁴ Time Warner Cable Comments at 18.

⁵ See, e.g., *id.* at 2.

cable.⁶ And a broad range of industry participants – including both consumer electronics manufacturers and video providers – have worked together to create new products and devices that are compatible through the use of open standards such as the Digital Network Living Alliance (“DLNA”)⁷ and the RVU standard, which allows video networks to interact with various devices such as televisions, digital video recorders, and personal computers based on Internet Protocol (IP) connectivity.⁸ Accordingly, the Commission should let consumer preferences and marketplace demand drive video device innovation and dictate the types of functionalities supported by connectors,⁹ and should not mandate the use of any particular type of interface.

B. The Commission Should Not Take Further Steps to Entrench CableCARDS.

Given the significant progress that is being made in video device innovation, the record confirms that the Commission should not further entrench the existing CableCARD mandate through “interim” steps. The record confirms that consumers have shown little interest in CableCARDS.¹⁰ As a cable-centric technology, CableCARDS

⁶ See Comments of Multimedia over Coax Alliance, CS Docket 97-80, PP Docket 00-67 (filed Jun. 14, 2010) (“MoCA Comments”).

⁷ See Comments of Digital Living Network Alliance, CS Docket 97-80, PP Docket 00-67 (filed Jun. 14, 2010) (“DLNA Comments”).

⁸ See Comments of RVU Alliance, CS Docket 97-80, PP Docket 00-67 (filed Jun. 14, 2010) (“RVU Comments”).

⁹ See Comments of Motorola, Inc., CS Docket 97-80, PP Docket 00-67 at 11 (filed Jun. 14, 2010) (“Motorola Comments”).

¹⁰ See, e.g., Comments of the National Cable & Telecommunications Association, CS Docket 97-80, PP Docket 00-67 at 3 (filed Jun. 14, 2010) (“NCTA Comments”); Comments of Comcast Corporation, CS Docket 97-80, PP Docket 00-67 at 5 (filed Jun. 14, 2010) (“Comcast Comments”).

have failed to address developments in the delivery of video programming.¹¹ As Motorola noted, “CableCARD technology is becoming outdated in a video marketplace that is migrating to IP-based networks and non-CableCARD security solutions.”¹²

In light of CableCARDs’ recognized failures, the Commission should not expand the CableCARD mandate by applying it to new technologies like switched digital video (“SDV”). Although Verizon does not utilize SDV technology, it is clear as a general matter that applying existing and failed standards like CableCARD to new services or technologies will lead to needless expense and regulatory uncertainty, and ultimately will stifle innovation. Commenters also agree that a market-based solution to allow retail devices to access SDV is working and the Commission should not impose further requirements.¹³

Similarly, the Commission should not divert providers’ resources from more productive efforts in order to support CableCARD technology at the end of its lifecycle. Even if the Commission had specific authority to impose its pricing and billing proposal, which it does not, a number of commenters agree that doing so would likely cause a great deal of confusion and frustration for the vast majority of consumers who lease their boxes from their video provider.¹⁴ Customers leasing set-top boxes would undoubtedly be

¹¹ See Comments of the Organization for the Promotion and Advancement of Small Telecommunications Companies and the National Telecommunications Cooperative Association, CS Docket 97-80, PP Docket 00-67 (filed Jun. 14, 2010) (“OPASTCO and NTCA Comments”).

¹² Motorola Comments at 5.

¹³ See, e.g., NCTA Comments at 36; U.S. Chamber Comments at 4; Time Warner Cable Comments at 6.

¹⁴ See, e.g., NCTA at 17, Comments of the Charter Communications, CS Docket 97-80, PP Docket 00-67 at 1 (filed Jun. 14, 2010) (“Charter Comments”); Time Warner Cable Comments at 11-13.

upset by the addition of a new charge on their bill, which they would have no option to decline, and such a mandate would require a substantial customer education campaign to explain the origin of the charge, the purpose of the charge, and the fact that despite the addition of a new line item, overall charges are not meant to increase.

Moreover, comments in the record show that the Commission should not impose any other “interim” steps, including self-installation protocols, that would have the effect of slowing the industry’s move to a successor technology or technologies to CableCARDS. Providers have every incentive to answer consumer demand with respect to self-installation of CableCARDS and are in the best position to determine how best to meet consumer needs.¹⁵

C. The Record Demonstrates Broad Consensus for the Permanent Removal of Existing Outmoded Requirements Like the 1394 Interface and the Avoidance of Any Interface Mandates.

As Verizon noted in its initial comments, the Commission should not require cable operators to support bi-directional communications over specific interfaces, and indeed should eliminate such technology-specific requirements. In particular, the Commission should eliminate the requirement to include the costly and rarely used IEEE 1394 interface in all high definition set-top boxes, not adopt new regulatory requirements (as the FNPRM proposes) in an effort to make this interface more robust.¹⁶

Indeed, the Commission should take this opportunity to remove permanently the existing 1394 interface requirement. As the Media Bureau recently determined in

¹⁵ See Time Warner Cable Comments at 11; Charter Comments at 4.

¹⁶ See FNPRM, ¶ 21; see also 47 C.F.R. § 74.640(b)(4) (detailing the IEEE 1394 requirement).

granting an interim waiver of the requirement, the 1394 interface has largely been overtaken by events:

At the time of adoption, the IEEE 1394 interface was the only digital video interface available for consumer devices that supported recording devices and networking. Since the time of adoption, however, most home networking devices have migrated toward technologies based on IP.¹⁷

The Media Bureau went on to find that such IP-based interfaces “can also provide the baseline connectivity that the IEEE 1394 output requirement was intended to achieve” and that inclusion of such interfaces meets “the Commission’s policy objective by including connections on their set-top boxes that will enable cable subscribers to enjoy the full range of services offered by their cable providers in a secure, digital format that third-party devices on their home networks can receive.”¹⁸ The Media Bureau also concluded, “[g]iven the strong marketplace acceptance” of other IP connectors, that the FCC’s rules should not be applied in such a way as to discourage manufacturers from including them on their devices.¹⁹

While the Media Bureau’s waiver decision provides welcome relief and is a step in the right direction, the temporary nature of the waiver (which expires upon the adoption of the rules in this proceeding)²⁰ means that device manufacturers and service providers will be unlikely to take full advantage of the flexibility offered by the decision. The nature of product development and the lead times built into any set top box deployment decision make it difficult for entities to rely on a temporary waiver when

¹⁷ *1394 Waiver Order*, ¶ 2.

¹⁸ *Id.*, ¶ 8.

¹⁹ *Id.*, ¶ 10.

²⁰ *Id.*, ¶ 12.

developing new devices. In order to fully realize the public interest benefits identified by the Media Bureau,²¹ the Commission should state with certainty that the 1394 interface requirement will be permanently lifted.

In this proceeding, a number of commenters strongly support a permanent removal of the 1394 interface requirement and avoiding the establishment of further interface mandates.²² Consistent with the Media Bureau's finding, these commenters observe that the 1394 interface goes largely unused and manufacturers can provide consumers with a richer media experience at lower cost through the use of newer technologies. A broad range of commenters, including video providers, the Chamber of Commerce, and manufacturers, agree that "the 1394 requirement has cost consumers more than it is worth."²³ Even Public Knowledge supports lifting the requirement; as Public Knowledge noted, "[b]y dropping the IEEE 1394 interface requirement, the Commission can have its cake and eat it too; lowering the cost of devices in the short term without sabotaging the emergence of a competitive retail marketplace for interoperable devices."²⁴ Consumers have favored other more commonly used IP connectors over the more costly 1394 interface.²⁵ And virtually no home entertainment

²¹ *Id.*, ¶ 10.

²² *See, e.g.*, NCTA Comments at 27; U.S. Chamber Comments at 4; Comments of Public Knowledge, CS Docket 97-80, PP Docket 00-67 at 16 (filed Jun. 14, 2010) ("Public Knowledge Comments"); Time Warner Cable Comments at 17; Comments of Cisco Systems Inc., CS Docket 97-80, PP Docket 00-67 at 20 (filed Jun. 14, 2010) (Cisco Comments); Comcast Comments at 5.

²³ NCTA Comments at 27; *see also* U.S. Chamber Comments at 4; Cisco Comments at 20 (arguing that increasing flexibility would allow Cisco to produce set-top boxes with a full range of home networking features at a lower cost than it can today).

²⁴ Public Knowledge Comments at 16.

²⁵ *See* Motorola Comments at 8; *see also* Comments of Consumer Electronics Association and Consumer Electronics Retailers Coalition CS Docket 97-80, PP Docket

products that receive content from set-top boxes and other consumer electronic devices rely on the 1394 interface for recording or home networking.²⁶ In fact, notwithstanding the presence of the 1394 mandate for several years – and the growing popularity of other digital outputs in the absence of regulatory mandates – neither Texas Instruments, which holds a significant proprietary interest in 1394 technology, nor the 1394 Trade Association, can point to any real consumer demand for the interface.²⁷

Commenters also agree that the Commission should avoid even developing a list of “approved” interface standards because such a list would once again be likely to impose unnecessary expense on consumers, frustrate innovation, and become quickly outdated.²⁸ Mandating specific interfaces also limits innovation and prevents standards from evolving “by capping, interoperability, performance and standards” at specific points in time.²⁹ For example, the *FNPRM*’s list does not include MoCA, an innovative and widely-used standard that brings cost savings to consumers by utilizing existing inside wiring.

In sum, as the record demonstrates, rather than requiring providers to expend time, money, and resources on failed technology mandates in lieu of more productive

00-67 at 19 (filed Jun. 14, 2010) (conceding that the market has favored other interfaces over 1394).

²⁶ For example, DLNA devices would not use the 1394 interface. *See* DLNA Comments at 3.

²⁷ *See* Comments of Texas Instruments Incorporated, CS Docket 97-80, PP Docket 00-67 (filed Jun. 14, 2010); Comments of 1394 Trade Association, CS Docket 97-80, PP Docket 00-67 (filed Jun. 14, 2010).

²⁸ *See, e.g.*, NCTA Comments at 20; OPASTCO and NTCA Comments at 5; Motorola Comments at 9; Comcast Comments at 5; MoCA Comments at 4.

²⁹ MoCA Comments at 4.

ventures, the Commission should avoid technology mandates altogether and remove existing, outdated requirements.

III. CONCLUSION

For the foregoing reasons, the Commission should not adopt its proposed rules in the FNPRM and should instead use this opportunity to remove permanently outmoded requirements like the 1394 interface requirement.

Respectfully submitted,

BY: /s/Edward Shakin

Michael E. Glover
Of Counsel

Edward Shakin
William H. Johnson
VERIZON
1320 North Courthouse Road
Ninth Floor
Arlington, Virginia 22201

June 28, 2010

Attorneys for Verizon