

BEFORE THE  
Federal Communications Commission  
WASHINGTON, D.C.

In the Matter of	)	
	)	CSR-7042-Z
Verizon's Petition for Waiver of	)	
the Set-Top Box Integration Ban,	)	CS Docket No. 97-80
<u>47 C.F.R. § 76.1204(a)(1)</u>	)	

**COMMENTS OF MOTOROLA, INC.**

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September 18, 2006

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Motorola, Inc. (“Motorola”) hereby submits these comments in response to the Commission’s Public Notice in the above-captioned proceedings.<sup>1</sup> Verizon has filed a request for a waiver of the Commission’s integration ban rule for its set-top boxes (“Petition”).<sup>2</sup> Motorola strongly supports this waiver request and urges the Commission to give prompt approval to the request for the reasons set forth below.

Motorola currently supplies four set-top box models to Verizon for deployment to FiOS TV customers: the QIP2500, QIP2708, QIP6200, and QIP6416. As described in the Petition, Verizon utilizes a hybrid QAM-IP architecture to deliver its FiOS TV service. Under this architecture, traditional digital cable services, including high-definition programming, are transmitted downstream using QAM modulation, while video-on-demand, the interactive

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<sup>1</sup> See *In the Matter of Verizon’s Petition for Waiver of the Set-Top Box Integration Ban*, 47 C.F.R. § 76.1204(a)(1), Public Notice, CSR-7042-Z, CS Dkt. No. 97-80, DA 06-1734 (*rel.* Aug. 29, 2006).

<sup>2</sup> See *In the Matter of Verizon’s Petition for Waiver of the Set-Top Box Integration Ban*, 47 C.F.R. § 76.1204(a)(1), Petition for Waiver, CS Dkt. No. 97-80, DA 06-1734 (Aug. 8, 2006).

program guide, and various new and innovative services are transmitted using IP technology.<sup>3</sup> Motorola's QIP set-top boxes are hybrid devices capable of processing both QAM and IP signals. The QIP2500 supports standard MPEG-2 digital video formats;<sup>4</sup> the QIP2708 supports standard MPEG-2 digital video formats and also includes a 80 GB hard drive for digital video recording ("DVR") functionality;<sup>5</sup> the QIP6200 supports both standard definition and high-definition MPEG-2 digital video formats;<sup>6</sup> and the QIP6416 supports both standard and high-definition MPEG-2 digital video formats and also includes a 160 GB hard drive for DVR functionality.<sup>7</sup> The QIP2500 and QIP6416 can also be used in a home-networking architecture, where the QIP6416 serves as the hub device and the QIP2500 as the remote terminal attached to a secondary television set elsewhere in the home.<sup>8</sup>

Verizon has demonstrated that grant of the waiver will have substantial public interest benefits. As Verizon pointed out in its Petition, Section 629(c) of the Communications Act -- the provision of the navigation device statute under which the waiver was filed -- specifically provides for approval of waivers where "necessary to assist the development or introduction of a

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<sup>3</sup> See Petition at 8-9, 17-18; see also *id.*, Declaration of Brian H. Whitton ¶ 4 ("Whitton Decl.").

<sup>4</sup> See <http://broadband.motorola.com/catalog/productdetail.asp?ProductID=445> (product description for QIP2500).

<sup>5</sup> See <http://broadband.motorola.com/catalog/productdetail.asp?ProductID=461> (product description for QIP2708). The QIP2708 is targeted for deployment in November 2006.

<sup>6</sup> See <http://broadband.motorola.com/noflash/QIP6200.html> (product description for QIP6200).

<sup>7</sup> See <http://broadband.motorola.com/catalog/productdetail.asp?ProductID=446> (product description for QIP6416).

<sup>8</sup> See Karen Brown, *Verizon Goes Whole Home*, Multichannel News (Aug. 21, 2006) (describing Verizon's launch of its home-networking solution).

new or improved multichannel video programming or other service.”<sup>9</sup> Consistent with that statutory standard, grant of the Verizon waiver will facilitate the deployment of new and innovative services over Verizon’s high-capacity, fiber-optic plant. For example, Verizon’s systems will be capable of carrying a substantial amount of high-definition and digital channels. Moreover, the IP functionality of Verizon’s network and customer equipment permits it to integrate data applications into the customer’s television experience. For instance, aside from the home-networking solution referenced above, Verizon recently announced the launch of FiOS TV Widgets, which allows subscribers to check weather and traffic reports directly on their television sets via their set-top box.<sup>10</sup> Future implementations of FiOS TV Widgets may include real-time, on-demand sports scores and news.<sup>11</sup>

In contrast, failure to grant the waiver will result in significant public interest harms. First, imposing a CableCARD requirement on the hybrid QAM/IP set-top boxes based on existing CableCARD-related standards would deny Verizon customers the full benefits of the FiOS TV service. As Verizon noted in its Petition, a CableCARD solution does not currently exist for hybrid set-top boxes. The current technical standards for CableCARD-enabled host devices were developed for QAM-based cable systems, not for cable systems such as Verizon’s which utilize QAM *and* IP on a fiber-to-the-premises network.<sup>12</sup> Consequently, devices built to these existing standards would not be able to deliver IP-based services to FiOS TV customers,

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<sup>9</sup> Petition at 10 (citing 47 U.S.C. § 549(c)).

<sup>10</sup> *Id.* at 9.

<sup>11</sup> *Id.*

<sup>12</sup> *See id.* at 18 & Whitton Decl. ¶ 7.

including, among other things, VOD and EPG services. Verizon has underscored that such a CableCARD solution would therefore be of limited utility and appeal to its customers.<sup>13</sup>

Second, even assuming a unique CableCARD solution for the FiOS network could be developed by the time the integration ban goes into effect in about nine months (which, as Verizon noted, would be extremely difficult if not impossible<sup>14</sup>), pursuing this alternative would add substantial costs to the Verizon service. As Verizon explained in its Petition, making a set-top box CableCARD-compliant can add upwards of \$95 to the wholesale price of the device -- \$25 for CableCARD-components in the set-top box and an additional \$50-70 for the CableCARD itself.<sup>15</sup> These figures do not even account for the substantial additional costs, complexities, and time exigencies associated with developing and engineering a unique solution for the FiOS network. In short, imposing a CableCARD requirement on the hybrid set-top boxes deployed in the FiOS network would dramatically change the economics of these devices, increase costs for Verizon and its customers, and “create a chilling effect on Verizon’s ability to expand and develop the FiOS TV service.”<sup>16</sup> Additionally, FiOS TV is still a nascent service,

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<sup>13</sup> See Petition at 18, 21-22.

<sup>14</sup> See *id.* at 19.

<sup>15</sup> See *id.* at 15 & Whitton Decl. ¶ 12 (also noting limited effects of economies of scale on these costs). NCTA has included similar cost estimates in its previous filings in the navigation device docket. See, e.g., Letter from Neal M. Goldberg, NCTA, to W. Kenneth Ferree, FCC, filed in CS Dkt. No. 97-80, at 1 (Jan. 7, 2003) (estimating the incremental cost of CableCARD implementation at between \$72 and \$93 per device); Report of NCTA Regarding the Significant Costs to Consumers Arising from the 2005 Ban on Integrated Set-Top Boxes, filed in CS Dkt. No. 97-80 (Aug. 2, 2002) (same).

<sup>16</sup> See Petition at 11.

and it is therefore doubtful whether a CE manufacturer would elect to make the substantial investment in products that only work on the FiOS network at this time.<sup>17</sup>

Third, failure to approve the waiver could slow the development and implementation of a downloadable security solution for the FiOS network and impair Verizon's ability to offer innovative services. Verizon has made plain its strong preference for deploying downloadable security in lieu of the CableCARD, noting, among other things, that "a downloadable software security implementation has the potential to be cheaper and easier to implement and is also more convenient for consumers . . . [and] also simplifies customer installation and reduces the equipment that a customer must purchase or lease."<sup>18</sup> If, however, the Verizon waiver is not granted, efforts to develop and deploy downloadable security for the FiOS network will be delayed as limited manpower and other resources would have to be diverted away from downloadable security to develop CableCARD alternatives for the QAM/IP hybrid set-top boxes.<sup>19</sup> Equally important, building and deploying CableCARD-enabled set-top boxes will divert resources from development of additional innovative services that Verizon could offer

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<sup>17</sup> See *id.* at 21 & Whitton Decl. ¶ 6.

<sup>18</sup> Petition at 16. The Commission has underscored the public interest benefits of downloadable security, noting, among other things, that downloadable security will offer a "less expensive and more flexible system for both protecting system security and creating a consumer product interface." *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Second Report & Order, 20 FCC Rcd. 6794 ¶ 31 (2005) ("2005 Integration Ban Order"); see also *id.* (noting that downloadable security "is likely to facilitate the development of a competitive navigation device market, aid in the interoperability of a variety of digital devices, and thereby further the DTV transition"); *id.* (noting that downloadable security "would not require the potentially costly complete separation of the physical security element").

<sup>19</sup> The Commission expressed concerns about the diversion of resources away from downloadable security in its *2005 Integration Ban Order*, see *id.*, and there are similar risks present if a CableCARD alternative must be developed for the hybrid set-top boxes deployed in the FiOS network. See also Petition at 4 ("In sum, a waiver would benefit consumers by avoiding the need to develop a costly, complex, inefficient and ultimately superfluous physical separation solution that will only delay the provision of important new services.").

over the FiOS network, thereby undermining Section 629(c)'s key objective and jeopardizing the rollout schedule for FiOS TV.<sup>20</sup>

In sum, Motorola is concerned that reallocating resources in this way will deny Verizon, its customers, and consumer electronics manufacturers the many public interest benefits associated with downloadable security and generally detract from further innovation with respect to digital cable equipment and services -- all without any clear public interest benefit. As Verizon aptly concluded, it simply makes no sense to force it "to commit substantial resources to what is, in essence, a stop-gap solution that will soon be obsolete"<sup>21</sup> and "engage in the burdensome and ultimately pointless immediate step of implementing a physically separate [conditional access] solution."<sup>22</sup>

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<sup>20</sup> See Petition at 17.

<sup>21</sup> *Id.* at 19.

<sup>22</sup> *Id.* at 17.

In light of the foregoing, Motorola respectfully asks that the Commission give prompt approval to the Petition.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I, Steve B. Sharkey, hereby certify that, on September 18, 2006, copies of the attached Comments of Motorola, Inc. were served via regular mail, on the following:

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