

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

In the Matters of)	
)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act)	GN Docket No. 09-47
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act)	GN Docket No. 09-137
)	
Commercial Availability of Navigation Devices)	CS Docket No. 97-80

COMMENTS OF TIME WARNER CABLE INC. – NBP PUBLIC NOTICE #27

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Time Warner Cable Inc. (“TWC”) hereby submits its comments in response to the Commission’s Public Notice regarding the interplay among video convergence, navigation device innovation, and the goals underlying the national broadband plan.¹

INTRODUCTION AND SUMMARY

TWC is keenly focused on maximizing value and flexibility for its subscribers, and it is accordingly pursuing initiatives to ensure that they can access any content, through any device, anywhere, and at any time. These efforts coincide with the Commission’s goals of expanding broadband access and utilization, delivering the richness of the Internet to television sets, and creating a robust retail environment for set-top devices and Internet-connected TVs.

¹ Public Notice, *Comment Sought on Video Device Innovation (NBP Public Notice #27)*, GN Docket Nos. 09-47, 09-51, 09-137, CS Docket No. 97-80 (rel. Dec. 3, 2009) (“Public Notice”).

The best way to achieve these shared objectives will be to allow ongoing marketplace initiatives to develop organically. Indeed, competition is already driving innovative solutions, such that, without any further regulatory action, consumers will have access to a broad array of navigation devices, for lease and purchase, that deliver not only subscription video programming but a multiplicity of video-on-demand (“VOD”) and online content. Much of this innovation is occurring in areas that are wholly unregulated, yielding a variety of devices—the iPod and Xbox, among other examples—that enable consumers to access a wide array of content. Any effort to dictate particular technological solutions in this nascent and rapidly changing marketplace would likely curtail innovation, rather than advance it.

While new regulatory mandates are not necessary or appropriate at this time, the Commission can play an important role in fostering continued progress by issuing a Notice of Inquiry (“NOI”) focused on identifying and eliminating obstacles to further video convergence and device innovation. Such an NOI would enable the Commission to gain a more complete understanding of the reasons why consumers continue to prefer leased set-top boxes to retail navigation devices. The NOI also should explore how best to utilize the home broadband service model (including DLNA and DTCP standards) to connect multichannel video programming distributor (“MVPD”) interface devices to robust downstream equipment in a manner that fosters video convergence and advances the goals underlying Section 629. Moreover, the NOI should investigate regulatory impediments that could stand in the way of achieving these goals.

If the Commission nevertheless were to insist on intervening to promote further interoperability and device innovation, it could focus on encouraging development of a small “set-back” device that would include many simplified functions associated with today’s set-top boxes, including computer processing, memory, software to render the MVPD’s user interface,

remote control codes, and a standard HDMI output. Such a set-back device would fit into a standard form factor on the back of TV sets and other consumer electronics (“CE”) devices and thus would enable each MVPD to supply a relatively low-cost interface module that would work with commercially available devices. Functionalities associated with today’s DVRs could be supplied by downstream devices. While such an approach would be feasible, it would replicate the functionalities offered by existing set-top boxes, many of which already include DTCP or DLNA outputs that enable interoperability with a variety of CE devices. TWC accordingly does not believe that undertaking such an initiative would justify the necessary development and implementation costs.

In all events, to the extent the references to “network agnostic” devices in the Public Notice contemplate development of a universal plug-and-play device that could receive and render any MVPD’s services—as opposed to set-back devices that would have a common form factor but would be proprietary to each MVPD, as with CableCARDS—any attempt to mandate such a course would be profoundly ill-advised. Reaching agreement among the different industry segments and developing the necessary middleware and protocols for a device that would be compatible with today’s divergent cable, IPTV, and DBS platforms would be so massively complex as to be impossible, as a practical matter. Indeed, even if it were feasible to agree on and develop appropriate technical standards, such a labyrinthine process would take years to complete without any assurance that consumers would want to pay a premium to purchase compatible navigation devices at the end of the day. Such a diversion of resources would impede, rather than advance, device innovation, video convergence, and broadband utilization. The Commission and the public interest would be far better served by encouraging the organic convergence process that is already underway.

BACKGROUND

TWC, the nation's second-largest cable operator, serves approximately 14.7 million customers in 28 different states over its technologically advanced broadband networks passing nearly 27 million homes. In addition to offering basic and digital cable services, TWC is a leading provider of broadband Internet access and facilities-based interconnected VoIP services to customers across its footprint. TWC has long been an innovator in the broadband arena, establishing a remarkably successful track record in the provision of broadband-based services to residential and enterprise customers for over a decade.²

As noted above, TWC seeks to ensure that its cable subscribers can access the content they want, through any device, anywhere, and at any time. This objective stems from a desire to differentiate TWC's services in the increasingly competitive marketplace. TWC faces two or more MVPD competitors in 99 percent of its footprint, and three or more in almost half of its footprint.³ In addition to the national DBS providers and rapidly growing telco video providers, there are a growing number of over-the-top competitors, such as Netflix, Hulu, and AppleTV, that stream online video content to the TV. In the face of such competition, TWC is focused both on delivering the richness of the Internet through cable set-top boxes and enabling Internet-connected third-party devices—including plug-and-play TVs, PCs, handheld mobile devices, and game consoles—to access TWC's subscription content.

² Comments of Time Warner Cable Inc., GN Docket No. 09-51, at 3-4 (filed June 8, 2009).

³ *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Thirteenth Annual Report, 24 FCC Rcd 542 ¶¶ 4-5 (2009) (recognizing that “the MVPD marketplace has continued to grow” and “almost all consumers are able to obtain programming through over-the-air broadcast, a cable service, and at least two DBS providers,” and increasingly “consumers . . . have access to video programming delivered by emerging technologies, such as . . . fiber-to-the-home facilities”).

While the significant majority of TWC's subscribers lease set-top boxes today, that results from the many advantages of the lease model rather than any preference for that model on TWC's part. In fact, TWC would be better off if consumers purchased navigation devices at retail, as leasing devices forces TWC to (a) tie up considerable capital in maintaining a sufficient inventory of boxes, (b) bear the risks that a device will malfunction or become obsolete, and (c) charge cost-based regulated rates (in areas not subject to effective competition) that generate more modest returns than TWC expects to earn through the provision of its core services. Given such consumer benefits, it is not surprising that all major MVPDs have gravitated to the lease model.

Despite the prevalence of the lease model, TWC has played a leading role in fostering industry-led solutions to plug-and-play compatibility, both in the unidirectional digital cable product ("UDCP") context and, more recently, in connection with tru2way. Indeed, TWC has devoted millions of dollars and countless hours to supporting those initiatives. TWC remains committed to supporting the goal of commercially available navigation devices, to the extent consumers are willing to pay for such equipment, as part of TWC's broad strategy of enabling the delivery of cable programming to any consumer device.

DISCUSSION

The Public Notice seeks comment on four sets of issues relating to video convergence and device innovation. TWC discusses each in turn.

A. What technological and market-based limitations keep retail video devices from accessing all forms of video content that consumers want to watch?

The marketplace continues to move towards the integration of online content with traditional video programming, breaking down barriers that once constrained consumers' access. TWC is undertaking several initiatives that will give its subscribers seamless access to online

content through leased set-top boxes. It remains unclear whether consumers will prefer to access discrete compilations of web content—as many high-end HDTV models today offer through on-screen widgets⁴—or to engage in full web browsing via a television. Either way, TWC is prepared to work with manufacturers to introduce new devices that satisfy consumer demand. Such initiatives will advance the Commission’s goals in connection with the national broadband plan as well as device innovation. There is no need for the Commission to take any action to promote these developments (even apart from significant questions regarding its authority to do so), because they are already occurring in the marketplace.

In addition to the expanding functionalities of cable set-top boxes, a variety of other CE devices increasingly will be able to access subscription video content provided by TWC. As the Public Notice recognizes, there are already a number of CE devices that integrate video content from multiple sources, including many that have developed without any regulation whatsoever.⁵ The agreement by leading cable operators and CE manufacturers to deploy tru2way network equipment and devices will enable manufacturers to integrate cable programming into such devices, as well as into plug-and-play TVs and set-top boxes.⁶ In contrast with most one-way CableCARD devices, which were hampered by their limited functionality, tru2way makes it

⁴ See, e.g., *Samsung Introduces First LCD with Internet TV Widgets* (Feb. 28, 2009), available at <http://www.geekword.net/samsung-introduces-first-lcd-with-internet-tv-widgets/>.

⁵ See Public Notice at 4 (referring to TiVo, Moxi, Microsoft’s Xbox 360, AppleTV, Roku, Sony Playstation 3, and Vudu).

⁶ See Memorandum of Understanding Among Cable Operators and Consumer Electronics Adopters Regarding Interactive Digital Cable Ready Products (Apr. 25, 2008), appended to Letter from Joel Wiginton, Sony Electronics Inc., and Kathryn Zachem, Comcast Corporation, to Monica Desai, Chief, FCC Media Bureau, CS Docket No. 97-80, PP Docket No. 00-67 (filed June 10, 2008).

possible for a third-party device to display interactive cable programming (including switched digital video and VOD) alongside online content.⁷

As TWC has previously explained, there is no legal or policy basis for forcing the disaggregation of cable services such that certain components could be stripped out while others are selectively accessed via a third party's user interface.⁸ Such an approach would frustrate consumer expectations, chill innovation, and exceed the Commission's authority. The answer to any purported problems with device innovation cannot be to prevent consumers from viewing cable services as they are intended to be delivered and experienced. Cable services are tightly integrated with the cable navigator, just as online programming services such as Netflix or Hulu present their own unique look and feel. Neither anything in Section 629 nor any legitimate public policy rationale supports pulling apart integrated cable services, any more than it would warrant disaggregation of over-the-top programming services.

B. Would a retail market for network agnostic video devices spur broadband use and adoption and achieve Section 629's goal of a competitive navigation device market for all MVPDs?

Although TWC is eager to deliver Internet content to set-top boxes and other CE devices, it is unlikely that Internet-over-TV will represent a viable strategy for bridging the digital divide. The Public Notice points out that, “[a]lthough 76 percent of U.S. households have personal computers, 99 percent have television sets.”⁹ Yet the non-PC households are unlikely to

⁷ TWC's VOD programming is available on tru2way devices through TWC's user interface in the very same menu-driven format used to present other aggregators' on-demand content via their user interfaces. A tru2way device can use its own guide software to display various options on a top-level menu page—such as TWC VOD, Hulu, Netflix, or Amazon—and the user can select among these options, each of which has its own look and feel as a result of its integrated user interface.

⁸ See Comments of Time Warner Cable Inc., CS Docket No. 97-80, PP Docket No. 00-67, at 31-32, 37-40 (filed Aug. 24, 2007) (“TWC Plug and Play Comments”).

⁹ Public Notice at 2.

purchase Internet access for viewing on a television set. In TWC's experience, most households lacking Internet access report reasons unrelated to PC ownership, including lack of interest or cost. Moreover, a disproportionate share of households with TVs but no Internet service have no set-top boxes at all and thus may be unwilling to attach a new device in order to obtain broadband access. Thus, while TWC is confident that many of its cable subscribers who already purchase Internet access will be eager to access online content in conjunction with subscription cable programming, thus promoting broadband *utilization*, such video convergence should not be viewed as a near-term broadband *adoption* strategy.

With respect to Section 629, TWC submits that the best way for the Commission to pursue the goals it embodies is to allow marketplace developments to continue unimpeded. As described above and in the following section, video convergence is well underway, and many cable set-top boxes already include DLNA and DTCP outputs that enable connectivity with compatible TVs, DVRs, DVD and Blu-ray players, and other devices.

To the extent the Commission is seeking to understand why retail plug-and-play devices have not fared better in the marketplace, there are a variety of explanations that the Commission should explore further through an NOI. One significant reason, as noted above, is that the lease model offers consumers significant advantages. Another is that many consumers appear unwilling to purchase a navigation device that can only work with a cable system. That is why, as the Public Notice recognizes, TWC has touted the advantages of an all-MVPD solution over any cable-specific regulatory solution.¹⁰

¹⁰ See, e.g., TWC Plug and Play Comments at 8 (stating that “any regulatory solution intended to create a retail market for two-way plug-and-play devices must embrace all MVPDs”).

At this stage, however, it would be counterproductive to mandate any particular *regulatory* solution, because the market will do a better job of promoting device innovation. If the Commission nevertheless were to insist on taking affirmative action beyond issuing an NOI, one option may be to encourage the development of a set-back device with a standard form factor. As explained above, such an approach would have the benefit of standardizing the interface between each MVPD's gateway device and the CE device, in particular using an HDMI output to transmit the MVPD's content and user interface to any TV, DVR, etc. Yet, as TWC also noted, this approach would not entail any expansion of existing functionalities, raising the question whether it would be worth the necessary expenditure of resources. Of course, in order to ensure its success and satisfy the requirements of Section 629, such a solution would have to apply to all MVPDs (and not just cable operators).

In all events, however, the Commission should not pursue the unattainable goal of developing a single, universal gateway device that would be sold at retail and would be compatible with any MVPD's services. Developing technical standards and protocols for cable plug-and-play devices required a Herculean effort that spanned many years. Cable operators and CE manufacturers were required to devise solutions involving set-top box middleware, digital rights management, Codecs, and systems for navigation, VOD, and billing, among other things. It would be an order of magnitude more complicated than in the bilateral cable-CE context to forge a consensus among all MVPDs, given their reliance on even more divergent technologies. Inevitably, MVPDs and CE manufacturers would spend years wrangling over the thorny problems that arose in the cable-CE context, and then some.¹¹ Further complicating matters,

¹¹ See Comments of DirecTV, Inc., CS Docket No. 97-80, PP Docket No. 00-67, at 11 (filed Aug. 24, 2007) (because "all parties would have to start from scratch," the industry would have to reproduce "the decade-long cable negotiations").

some MVPDs still have not complied with the Commission's separate-security requirements, and MVPDs that do comply rely on fundamentally different conditional access solutions. And even if universal standards could ultimately be developed, there would be no assurance of consumer demand for compatible retail devices, particularly in light of the availability of leased devices from cable operators at regulated cost-based rates and the other consumer advantages associated with the lease model. Tellingly, despite TWC's considerable investment in developing a one-way plug-and-play solution, almost every major manufacturer quickly abandoned the concept and stopped selling any form of UDCP.

Because of the inherent complexity of any such undertaking, diverting resources to a massive new standards-setting endeavor would almost certainly impede further progress toward achieving the Commission's goals. Such a process would force providers to spend years in an attempt to standardize *existing* functionalities, rather than prioritizing the development of new ones. Accordingly, while TWC believes that broadband-enabled set-top boxes will be widely available to consumers in the near future absent further regulatory mandates, initiating a compulsory standards-setting process would delay such distribution and hamper related initiatives.

C. Can the home broadband service model be adapted to allow video networks to connect and interact with home video network devices such as televisions, DVRs, and Home Theater PCs via a multimedia home networking standard?

The development of home networking standards that enable consumers to move content among different devices (such as computers, televisions, and DVRs) is an important aspect of the ongoing innovation described above. TWC believes that such a model holds promise as a means of furthering video convergence, device innovation, and broadband utilization. In particular, the increasing prevalence of standards such as DLNA and DTCP will make it easier for consumers to connect TVs and other devices to the Internet. The end result is likely to be increasing

reliance on home networks with Internet connectivity and greater integration of subscription programming and online content.¹² The Commission should encourage reliance on such standards as a means of implementing the goals underlying Section 629.¹³

D. What obstacles stand in the way of video convergence?

As explained above, the process of developing technical standards for interoperable CE devices has been complex and time-consuming, but sufficient pieces are in place for video convergence to take off. There is no question that such convergence will benefit consumers who want to take advantage of it, and the Commission should encourage this ongoing transition. In particular, TWC supports issuance of an NOI that explores affirmative ways to promote convergence and device innovation, while seeking comment on the elimination of barriers to fulfilling the Commission's objectives. Among other things, the NOI would enable the Commission to gain a more complete understanding of the economics and other aspects of the lease-or-buy proposition. It also would enable exploration of using home networking standards as a means of promoting increased interoperability and device innovation. Moreover, the Commission should seek comment on the potential costs and benefits of making low-income subsidies available not only for PCs but integrated navigation devices. By taking a step back and exploring the problems and opportunities relating to device innovation and video convergence, the Commission would serve consumers' interests and would avoid the risks of diverting resources to counterproductive endeavors.

¹² See, e.g., *Home Sweet Networked Home, Part 2*, TECHNEWSWORLD, Dec. 3, 2009, available at <http://www.technewsworld.com/story/Home-Sweet-Networked-Home-Part-2-68800.html> (noting increased home use of networking based on industry standards).

¹³ See, e.g., Reply Comments of Panasonic Corp. of America, CS Docket No. 97-80, PP Docket No. 00-67, at 10-11 (filed Sept. 10, 2007) (endorsing home networking as a potential vehicle for full interoperability, and noting DLNA's momentum and that its member companies include key CE manufacturers and the largest MVPDs).

CONCLUSION

TWC is encouraged that its own business objectives align with the Commission’s goals of promoting video convergence, device innovation, and broadband utilization. The Commission should allow marketplace developments to proceed while launching an NOI to explore additional ways to facilitate ongoing progress toward the achievement of these goals.

Respectfully submitted,

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