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September 13, 2010

VIA ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: CS Docket No. 97-80; PP Docket No. 00-67

Dear Ms. Dortch:

On September 10, 2010, Kevin Leddy and Cristina Pauzé of Time Warner Cable Inc. (“TWC”), together with Brian Murray and the undersigned of Latham & Watkins LLP, met with the following Commission personnel to discuss the pending rulemaking regarding the use of CableCARDS in connection with unidirectional digital cable products (“UDCPs”): (1) Sherrese Smith, Legal Advisor to Chairman Genachowski, Steve Broeckaert, Kris Monteith, Mary Beth Murphy, Nancy Murphy, Brendan Murray, Alison Neplokh, and Jeff Neumann of the Media Bureau, and Marilyn Sonn of the Office of General Counsel; (2) Rosemary Harold, Legal Advisor to Commissioner McDowell; (3) Eloise Gore, Acting Legal Advisor to Commissioner Clyburn; and (4) Paul De Sa, Chief of the Office of Strategic Planning and Policy Analysis. At these meetings, TWC elaborated on its written pleadings and focused in particular on the contrast between the significant costs and speculative benefits of the so-called “IP return path” proposed as an alternative to the tuning adapter that enables UDCPs to access switched digital video (“SDV”) programming.

1. TWC’s Efforts to Support Commercially Available Navigation Devices

TWC first described its extensive efforts to further the objectives of Section 629 of the Communications Act of 1934, as amended. TWC explained that it has devoted substantial resources over several years to develop specifications, interfaces, and a separate-security element (*i.e.*, CableCARDS) for both UDCPs and tru2way devices—all without any assurance that manufacturers would build such products, retailers would market them, or consumers would demand them. For instance, TWC was a lead party in negotiating the 2003 agreement that led to the Commission’s issuance of the one-way plug-and-play rules, the OpenCable Unidirectional Receiver (“OCUR”) agreement with Microsoft to permit video content to be viewed on personal computers, and the tru2way agreement with leading manufacturers for the development of retail

consumer electronics devices with two-way capability. TWC also discussed the lengths to which it has gone to abide by leased-equipment obligations under both Commission rules and private industry agreements. To date, TWC has deployed 5.7 million separated security set-top boxes, 9.8 million set-top boxes with mandated IEEE 1394 connectors, and 5.1 million tru2way set-top boxes, with compliance costs totaling hundreds of millions of dollars.

In addition, TWC voluntarily worked to develop the tuning adapter to enable consumers with certain CableCARD-equipped UDCPs (including TiVo devices) to view SDV programming in addition to the traditional one-way services those devices were designed to receive. TWC has invested significantly in developing and deploying the tuning adapter, and thus far has distributed about 21,000 such devices, a figure that represents a substantial majority of its customers who use Cable-CARD-equipped TiVo devices in areas where TWC has deployed SDV technology. TWC has provided these devices at no charge to customers, even though it must still pay its vendors for each unit (on top of the substantial development costs). In addition, TWC worked with TiVo to develop marketing materials for customers to ensure that they are informed about the availability and functionality of tuning adapters. TWC has received positive feedback concerning the tuning adapter from many of its customers. Where issues have arisen—as is to be expected with any new technology—TWC has been proactive in trying to address them. Importantly, TWC has undertaken the expense and burden associated with developing, distributing, and supporting tuning adapters notwithstanding the Commission’s determination that the “migration” of linear video programming to a “switched digital video platform” is fully consistent with *Plug and Play Order* and the associated Commission rules, which “were not intended to provide access to bi-directional services or to freeze all one-way cable programming in perpetuity.”¹ TiVo overlooks that critical fact in arguing for an entirely new SDV “fix.”

Despite these significant and ongoing efforts, a robust retail marketplace for navigation devices has not developed. TWC explained that consumers have demonstrated a strong preference for leasing devices rather than purchasing them. Equipment leases are available at regulated, cost-based monthly rates rather than substantial up-front retail prices; they protect consumers from the risks that a device will malfunction or become obsolete; and they permit greater movement among MVPDs because they ensure that customers will not feel tied to one platform through their purchase of an expensive device. Thus, out of TWC’s more than 13 million video subscribers, TWC currently has fewer than 49,000 unique CableCARD customers—less than 0.4% of its subscriber base—and just short of 68,000 CableCARDS activated in retail devices.

2. The Significant Problems with the Proposed IP Return Path

In light of the Commission’s stated intent to phase out reliance on CableCARDS, TWC urged the Commission to proceed with caution as it considers any proposed “fixes” to purported problems with the CableCARD regime and to ensure that the burdens associated with any short-

¹ *Oceanic Time Warner Cable, a subsidiary of Time Warner Cable, Inc.*, Order on Review, 24 FCC Rcd 8716, ¶ 11 (2009).

term rule changes do not outweigh the anticipated benefits. While applying such a cost-benefit analysis is necessary with respect to all of the proposed rule changes under consideration, TWC explained that it is particularly important in connection with TiVo's proposal that cable operators be required to support an entirely new arrangement as an alternative to the tuning adapter. Under this proposal, each TiVo would use an Internet Protocol ("IP") pathway to signal cable headend equipment to deliver switched programming. TWC explained that this so-called "IP return path" would entail significant effort and expense by cable operators—on top of the substantial costs they already have incurred to develop and distribute tuning adapters—without commensurate benefits for consumers.

As TWC described at the meetings, the cable industry and TiVo originally discussed the IP return path approach more than three years ago, but TiVo agreed that the tuning adapter would offer a more reliable and readily achievable solution. TiVo made that choice based on its recognition—which no one at the time disputed—that attempting to implement an IP return path would be a significant and time-intensive undertaking without any assurance of success. Thus, at TiVo's request, the cable industry proceeded to develop the tuning adapter so that users of one-way TiVo devices would be able to view switched programming.

Three years later, the IP return path proposal remains untested and fraught with substantial complexities and costs. Indeed, there is no assurance that it would deliver TiVo users an adequate viewing experience, in contrast to the proven success of the tuning adapter. By its nature, SDV requires constant interaction between each customer's navigation device and the cable headend so the relevant network equipment can monitor what programming is being viewed and deliver only those channels that are requested by someone in the relevant service group. The tuning adapter enables such communications to take place over the same secure cable pathways used by TWC's two-way leased set-top boxes and, because the tuning adapter is located adjacent to the UDCP (and connected by a USB cable), it can deliver the local channel lineup to the UDCP and relay information about what is being viewed via the UDCP without any latency concerns. Relying on an IP return path, by contrast, would require cable operators to relocate the core functions of the tuning adapter to network locations that are far removed from the customer—specifically, to proxy servers that could translate IP signals into a format compatible with cable systems, which TWC and others would have to install throughout their cable networks. Such an approach would introduce an entirely new set of challenges relating to data transport and new interfaces, thus making the television-viewing experience dependent on a host of additional variables, including attributes of the customer's home network (*e.g.*, router configuration, wi-fi set-up, sources of interference, port-blocking, and firewalls), competing uses of finite bandwidth in the home, potential network outages, and so forth.

More specifically, to ensure that the channel lineup for the correct service group would be available to each TiVo device without an adjacent tuning adapter, TWC would have to find a way of "localizing" the TiVo device and conveying such information to the relevant proxy server. In addition, the proxy server would have to be able to monitor what programming is being viewed by each device in order to determine which channels should (and should not) be transmitted to the relevant service group at any given time. And when a customer selects a channel, the TiVo device would have to signal TWC's network to deliver that programming

without undue latency. The fact that TWC's video and high-speed data networks often have different service groups would compound these "localization" challenges. Apart from the need to purchase and install the necessary proxy servers, implementing such a proposal across scores of headends (and potentially at a more granular level) would require TWC's engineers to create a new network architecture, develop new software and firewalls, and undertake significant testing—all of which would not only entail substantial costs but also divert resources from other engineering initiatives.

Relocating functions that are provided today by a local tuning adapter to equipment that is closer to the core of the cable network would present a series of technical obstacles that, even if surmountable, could nonetheless undermine the customer experience. The relevant concerns include the following:

- The IP return path apparently would rely on the public Internet to transmit information between TiVo devices and cable headends, rather than TWC's managed and secure cable network.² The tuning adapter, by contrast, signals TWC's SDV equipment using the same secure pathways as leased set-top boxes. Thus, in order to protect its video network from viruses, malware, and other potential hazards introduced by the influx of IP signaling traffic, TWC would have to develop and put in place new firewalls and a more complex server architecture to protect the integrity of its video network. Whereas breaches of a private cable network are easy to detect and isolate, security breaches emanating from the public Internet would be difficult to identify or mitigate and could impact large service areas. The unauthorized interception of signaling information from the Internet also could compromise sensitive personal information about viewing choices.
- Moreover, TWC would not be able to assure the quality of service via "best efforts" Internet transmissions. Particularly for the approximately 25 percent of TWC's digital video customers who rely on other services (such as DSL) for their broadband

² See, e.g., Reply Comments of TiVo Inc., CS Docket No. 97-80 and PP Docket No. 00-67, at 13 (filed June 28, 2010) ("TiVo Reply Comments") (arguing that because "electronics retailers, ticket sellers, hospitals, banks, and the Internet Revenue Service can manage secure, private, and robust transactions on the public Internet, the cable industry and TiVo" should do likewise). TiVo further suggests in a footnote that use of the public Internet might be avoided if the proposed "service" were "available only on the operator's high speed data network." *Id.* at 13 n.15. To the extent that TiVo is suggesting that a cable operator be required to dedicate additional network capacity to create a private, managed IP channel that is distinct from its broadband Internet access service, that approach would involve taking such bandwidth away from other services provided by the cable operator, thus adding significantly to the burdens entailed by TiVo's proposal. Moreover, limiting the IP return path to TWC's own broadband subscribers would make the solution unavailable to the approximately 25 percent of TWC's cable customers who subscribe to other providers' broadband services, on top of those who purchase no broadband Internet access at all.

connectivity, TWC would have no way of controlling or monitoring the signals being sent from a TiVo device to the relevant proxy server. Even for TWC's customers who purchase TWC's broadband Internet access service, the anticipated reliability of the IP return path would be inferior to the tuning adapter, which as noted above communicates with the navigation device over a USB cable, rather than a broadband connection to a distant location.

- This reliability concern would be even greater where a TiVo device relies on a wi-fi connection, as is the case in a number of households. In such cases, latency issues would delay the signals being sent from the device to the video delivery network, threatening to compromise the customer's ability to navigate to switched programming seamlessly. In all likelihood, the customer would attribute such performance problems to TWC's cable service, rather than the IP connection used for signaling purposes.
- All of these challenges would be greatly compounded if the cable industry were required to employ uniform technical solutions rather than approaches that are proprietary to each cable operator. Experience shows that an industry-wide, standards-setting process would likely take years to complete.

The degree of these reliability problems would in turn dictate the extent to which TWC would have to redesign its network. At a minimum, TWC would have to install proxy servers at each of its approximately 65 headends. But if the communications between the UDCP and TWC's video network proved unreliable, TWC could be forced to install proxy servers closer to the edge of its network, such as at various hubs—of which TWC has over a thousand. Any such requirement would greatly increase TWC's costs; while the requisite development costs and equipment outlays would be millions of dollars at a minimum, such costs would increase by tens of millions of dollars if proxy servers were required at the level of hubs.

In contrast, the tuning adapter—which already is available and has been widely deployed—presents none of these difficulties. The tuning adapter connects to a TiVo device via a USB port, and all of its communications are transmitted over TWC's secure network rather than the public Internet. As a result, it provides a proven, consumer-friendly experience, regardless of whether the customer subscribes to a separate broadband Internet access service or whether she relies on a wi-fi connection to link the TiVo device to the Internet. The IP return path route at best provides a solution that is duplicative of the tuning adapter. In fact, for many customers, the IP return path approach could provide an inferior option for viewing switched programming. Due the reliability concerns described above, consumers relying on the IP return path would face the prospect of being unable to tune to the channels they want, or at least experiencing significant delays as they change channels.

Further, any household that does not have a broadband connection would be unable to utilize the IP return path approach at all. Such customers thus would still need the tuning adapter, while other customers could well elect to continue using a tuning adapter because of its relative advantages. As a result, even if the IP return path were a viable alternative to the tuning adapter, it would not replace it, and cable operators would have to continue supporting the tuning

adapter. The likelihood of diminished volumes resulting from a bifurcated approach to accessing SDV would make tuning adapter purchases even less cost-effective. Even apart from the fact that UDCPs were never intended to be compatible with two-way services like SDV, there can be no reasonable argument for imposing duplicative requirements to ensure that UDCPs can access SDV programming.

In addition to these significant practical difficulties, there is no apparent legal basis for the Commission to compel cable operators to implement the IP return path solution. Section 629 authorizes the Commission to promote a retail market for the “equipment used to access . . . services offered over multichannel video programming systems” 47 U.S.C. § 549(a). The tuning adapter already achieves that goal, by ensuring that consumers can purchase TiVo devices while still having access to switched programming. As noted above, the Commission already has found that the plug-and-play rules do not require cable operators to make SDV programming accessible to UDCPs; TWC has voluntarily undertaken the expense of making such programming available to TiVo customers. In any event, even if Section 629 somehow could be read as authority for new rules that require cable operators to employ particular technology (and the text, structure, and history of the provision all militate against such a reading), there is no reason to believe that the Commission can lawfully require duplication of an existing functionality in the name of supporting a retail marketplace.

Finally, TWC explained that pursuit of an IP return path mandate would be particularly ill-advised if undertaken in addition to a broader gateway-device proposal. Because the Commission is considering mandating the development and deployment of universal gateway devices for all MVPDs (*i.e.*, AllVid), it would be especially unreasonable to force cable operators *simultaneously* to undertake expensive network modifications to support a very short-term solution that would benefit only a relative handful of TiVo subscribers. To the extent that TiVo views an IP return path as a broader vehicle for giving UDCPs a “new dimension,”³ such issues should be addressed as part of the AllVid NOI proceeding, rather than in the CableCARD-focused rulemaking.

3. Other CableCARD Proposals

In addition, TWC urged the Commission to preserve cable operators’ flexibility to determine how best to manage CableCARD installations and to provide pricing information. Regarding installations, TWC argued that the Commission should preserve cable operators’ flexibility to implement whatever approaches—potentially including self-installations—they believe will meet their customers’ needs. TWC explained that it does not necessarily oppose self-installation, and it has permitted them in some of its service areas in the past. But TWC explained that its experience in that regard shows that self-installations can create substantial frustration from the consumer’s perspective. Consumers may not have the requisite level of technical expertise to install a CableCARD in their retail devices, and manufacturers may not

³ TiVo Reply Comments at 23.

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provide instructions for doing so. As a result, TWC frequently must expend more resources to assist a customer's self-installation than if TWC had installed the CableCARD.

Regarding the provision of pricing information, TWC expressed support for transparency but noted that the Commission should carefully consider the costs and benefits of any requirement that cable operators itemize CableCARD prices on customer bills. While it is a straightforward matter to identify the price for the lease of a stand-alone CableCARD to be used with a UDCP, isolating the imputed charge for a CableCARD used in conjunction with a leased set-top box would be far more challenging—and potentially misleading to consumers. Because bills already set forth substantial information in a limited space, the addition of any new itemized charge would require expensive revisions to the billing format and may displace other important information. Thus, TWC stated that if the Commission decides that cable operators should be required to disclose imputed CableCARD “prices,” it should avoid prescribing a specific method for doing so and allow cable operators to make that choice—for instance, using their Welcome Kit materials and websites— and also adopt a realistic and workable timetable for implementation. And if the Commission believes instead that such information should be presented on bills, TWC believes that it should allow that information to be included as part of the description of existing charges rather than as a new line item on bills.

Finally, TWC expressed its support for proposals that would grant greater flexibility to cable operators to meet customers' needs. First, TWC urged the Commission to exempt from the integration ban low-cost HD navigation devices in order to promote the entire cable industry's transition to all-digital operations, rather than limiting such relief to small cable systems. In addition, TWC asked the Commission to modify its rules to afford cable operators greater flexibility with respect to required interfaces and to eliminate the widely discredited mandate that cable operators include the IEEE 1394 interface in HD set-top boxes.

Please contact the undersigned if you have any questions regarding this notice.

Sincerely,

/s/ Matthew A. Brill

Matthew A. Brill

cc:	Sherrese Smith	Brendan Murray
	Steve Broeckaert	Alison Neplokh
	Kris Monteith	Jeff Neumann
	Mary Beth Murphy	Marilyn Sonn
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