

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

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| In the Matter of |) | |
| |) | |
| Video Device Competition |) | MB Docket No. 10-91 |
| |) | |
| Implementation of Section 304 of the Telecommunications Act of 1996 |) | |
| |) | |
| Commercial Availability of Navigation Devices |) | CS Docket No. 97-80 |
| |) | |
| Compatibility Between Cable Systems and Consumer Electronics Equipment |) | PP Docket No. 00-67 |
| |) | |

REPLY COMMENTS OF CABLEVISION SYSTEMS CORPORATION

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REPLY COMMENTS OF CABLEVISION SYSTEMS CORPORATION

Cablevision Systems Corporation (“Cablevision”) submits these reply comments in response to the Commission’s Notice of Inquiry (“*NOI*”) in the above captioned proceeding.^{1/} For the reasons set forth in its initial comments and for the reasons below, Cablevision urges the Commission to refrain from moving forward with its AllVid technology mandate and instead to allow market forces and consumer preferences to continue to provide consumers with innovative devices and services across multiple platforms.

INTRODUCTION AND SUMMARY

In its initial comments, Cablevision pointed out that much of what the Commission hopes to achieve with the AllVid device – primarily the ability to enjoy and consume MVPD services and other content on devices provided by third parties at retail – is already rapidly happening. The comments are rich with examples of this kind of innovation. MVPDs, device makers, and

^{1/} *Video Device Competition; Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, Notice of Inquiry, 25 FCC Rcd 5434 (2010) (“*NOI*”).

third party content providers today are creating new models to deliver content more easily, creatively, and quickly to consumers in a variety of ways.^{2/} They are, without a government mandate, advancing the Commission's goal to "unleash competition" in the market for smart set-top devices that are compatible with all MVPD services.^{3/}

For its part, Cablevision has been advancing the Commission's goal of facilitating consumers' access to video programming through the company's investments in cloud-based capabilities and downloadable security. Commenters in this proceeding agree that cloud computing and downloadable security can accomplish the same objectives underlying the AllVid proposal, but can do so in a manner that is faster, more efficient, more flexible, and far more hospitable to innovation.

At the same time, as Cablevision pointed out and commenters appear to agree, the imposition of an AllVid device mandate likely would reverse or halt this progress, substantially inconvenience consumers, and increase the cost and complexity of delivering video services. Commenters involved in designing and operating MVPD networks agree that imposing an AllVid device mandate would hamper innovation and competition in the device market that is already showing promise in light of the recent proliferation of IP-based technologies.

The AllVid device mandate would frustrate innovation in at least two phases: stagnation during development and stasis after deployment. First, the delays inherent in proposing, negotiating, designing and building the AllVid device will be substantial. Even supporters agree that the process of developing technical standards for the device is apt to be far more protracted

^{2/} Last week, Cablevision Chief Operating Officer Tom Rutledge announced that Cablevision "will provide our full service, everything we offer, in the home, on any device that can display TV or act as a TV." Yinka Adegoke, *Cablevision eyes Web-based TV for PCs, tablets*, REUTERS, August 5, 2010, available at <http://www.reuters.com/article/idCNN0510539620100805?rpc=44>.

^{3/} *NOI* at ¶ 1.

and complex than is assumed in the *NOI*; further, that process is likely to halt the pervasive innovation prevalent today in MVPD networks, as all parties involved wait to assess the impact that the ultimate device would have on those networks, and device makers, who anticipate opportunities from the AllVid mandate, lobby and push for preference in the specification. Second, even after specifications are agreed upon and adopted, once deployed, the device is static. Therefore, any MVPDs and device makers that seek to exploit newer technology will necessarily be designing “around” this legacy device, a market reality that will make the AllVid an electronic albatross in every home in the nation.

The record in this proceeding demonstrates that there is already substantial disagreement among supporters of the AllVid adapter of what the device should be. Some AllVid proponents envision a “simple” device, primarily designed to disaggregate and “unbundle” existing MVPD services. Conversely, other AllVid supporters with actual experience in making consumer equipment insist that the device will require much more functionality than that outlined in the *NOI* in order to both “pass” content capably and enable sophisticated interaction through third party devices. That debate highlights a fundamental problem with AllVid: it is extraordinarily difficult to design a “gateway” device that is capable of supporting both the full range of services and devices available today and all of the services and devices that will be developed tomorrow in this highly dynamic marketplace, without ultimately creating a piece of electronic equipment that, to preserve functionality and the flexibility required for innovation, is so complex, expensive, and cumbersome that it overburdens consumers and collapses of its own weight. And even that dilemma substantially understates the challenges of the AllVid mandate, as the comments from proponents largely ignore the realities of the marketplace for securing and obtaining high-value content and the unintended consequences that a technology mandate could

have on service costs, licensing agreements, content security, and the convenience and service to consumers.

Finally, regardless of its eventual form, complexity, and functionality, the AllVid mandate would result in a substantial new tax on MVPD consumers. Even if it is the “simple” design favored by some supporters, an AllVid mandate – requiring MVPDs to force these devices into the home for every viewing device – would impose additional annual costs on consumers of at least \$1 billion, with associated inconvenience and confusion, without providing any real obvious benefits to the vast majority of MVPD consumers.

Instead of assuming the substantial risks to innovation and consumers associated with the AllVid proposal, the Commission should refrain from moving forward with any type of technology or device mandate and allow market forces and consumer preferences to continue to bring to fruition the multi-device, multi-platform environment sought in this proceeding.

I. MVPDS ARE ALREADY INNOVATING IN THE ABSENCE OF A GOVERNMENT-IMPOSED TECHNOLOGY MANDATE TO OFFER CONSUMERS MORE OPPORTUNITIES TO ACCESS VIDEO PROGRAMMING VIA MULTIPLE DEVICES AND ACROSS MULTIPLE PLATFORMS.

The record demonstrates that right now, without a government technology mandate, MVPDs are making substantial progress toward providing consumers with more opportunities to obtain video programming through multiple devices and across multiple platforms. New innovations in video distribution by cable operators and MVPD competitors are increasing the variety of devices on which video can be consumed and the diversity of platforms across which video and other content can be accessed.^{4/} NCTA notes that cable operators now purchase set-

^{4/} See, e.g., Comments of Alliance for Telecommunications Industry Solutions at 4 (filed July 13, 2010) (“Emerging consumer trends are towards increased video consumption from a variety of sources (including Internet sources, not just MVPDs), in a variety of locations (not just the home) and on a variety

top devices from a growing number of electronics manufacturers – including Pace, Motorola, Cisco, Evolution Broadband, Samsung, Panasonic, ARRIS, and TiVo – and that a variety of IP-based, “over-the-top” platforms offer consumers access to multiple sources of video programming without a set-top device, including content from the libraries of Netflix, Amazon, HBO, ESPN, out-of-area Major League Baseball, MSNBC, and The Weather Channel.^{5/}

Verizon states that it offers its FiOS TV customers “Widgets,” or IP-based applications that run on Verizon’s set-top boxes and offer customers access to information about weather and traffic, and even feeds from Facebook and Twitter right on their television screens.^{6/} DIRECTV illustrates that the market is already making progress in bringing consumers a “shopping mall” for video services, noting the quantity and variety of new video devices and content offerings from a litany of providers, including Roku, which makes a set-top box that provides unlimited access to Netflix’s streaming catalog, Amazon Video on Demand, and MLB.TV, and Vudu, whose set-top box provides access to thousands of movies and TV shows on demand, as well as access to YouTube, Pandora, and Flickr.^{7/} In addition, as AT&T notes, other new providers such as Apple TV are also bringing Internet content to a variety of interfaces that display content on a consumer’s television set.^{8/}

Even AllVid supporters such as Public Knowledge acknowledge that the “technology for AllVid already exists, as demonstrated by the many devices that offer similar functionality” that

of devices (not just a TV set)” (“Comments of ATIS”); Comments of Time Warner, Inc. (filed July 13, 2010) at 2 (“consumers are benefitting from widespread, dynamic innovation that has greatly expanded their abilities to access video content on multiple platforms and through myriad devices”) (“Comments of Time Warner, Inc.”).

^{5/} Comments of the National Cable and Telecommunications Association at 8-9 (filed July 13, 2010) (“Comments of NCTA”).

^{6/} Comments of Verizon Wireless at 7 (filed July 13, 2010) (“Comments of Verizon”).

^{7/} Comments of DIRECTV, Inc. at 5 (filed July 13, 2010) (“Comments of DIRECTV”).

^{8/} Comments of AT&T, Inc. at 12 (filed July 13, 2010) (“Comments of AT&T”).

are on the market today^{9/} – thereby begging the question regarding the necessity for any sort of government-mandated technology. The market is “clearly already responding to consumer demand for more access to programming, and it is doing so in multiple creative ways that are embraced by multiple MVPDs and other video providers.”^{10/} The quantity and quality of new offerings for multi-device, multi-platform access to video content from cable operators, DBS, telco video providers and non-MVPD providers underscores Cablevision’s observation that there is no market failure here that warrants government intervention.^{11/}

MVPDs have no business incentive to make it harder for their customers to access their services via devices purchased at retail. To the contrary, just last week, Cablevision announced that it will make all of its video programming offerings available in the home on any subscriber device that can display television programming.^{12/} Cablevision’s announcement reflects the realities of today’s highly competitive and highly innovative marketplace: any provider that creates impediments to customers using devices of their own choosing risks losing its customers to rival MVPDs and/or alternative video platforms.

As demonstrated by the comments in this proceeding, the vibrant and growing market for retail devices being used by consumers “to access multichannel video programming” provided

^{9/} See Comments of Public Knowledge at 3 and n. 11 (filed July 13, 2010) (listing 20 devices on the market offering “similar functionality” to the AllVid) (“Comments of Public Knowledge”).

^{10/} Comments of NCTA at 17.

^{11/} See Comments of Cablevision Systems Corporation at 16-17 (filed July 13, 2010) (Comments of Cablevision”); See also Comments of Telecommunications Industry Association at i (filed July 13, 2010) (“The *Notice*’s premise of a failed retail market, however, is faulty. Today, the marketplace is meeting the Commission’s investment, innovation, and consumer choice goals with a wide variety of devices and services, including two-way connectivity to “over-the-top” Internet video. A mandated AllVid approach thus is unnecessary, and it runs the risk of burdening both industry and consumers with costs and complexities that are not justified by the purported benefits”) (“Comments of TIA”); Joint Comments of Dish Network and EchoStar Technologies at 2 (filed July 13, 2010) (“it appears premature to characterize the state of the market for ‘smart’ navigation devices as a failure”) (“Comments of Dish Network”).

^{12/} Yinka Adegoke, *Cablevision eyes Web-based TV for PCs, tablets*, REUTERS, August 5, 2010, available at <http://www.reuters.com/article/idCNN0510539620100805?rpc=44>.

over MVPD networks shows that the Commission’s core statutory objective is already being accomplished without any sort of technology mandate or regulatory compulsion.^{13/} The market’s success should give the Commission pause, given the substantial doubts raised by numerous commenters about its legal authority to proceed with an AllVid mandate – and particularly the forced disaggregation of MVPD services envisioned by some proponents.^{14/}

As noted in its initial comments, Cablevision is expanding its subscribers’ opportunities for multi-device, multi-platform access to video content by investing in downloadable security and cloud-based capabilities. These investments move network intelligence from the set-top box to the cloud, thereby accomplishing the objectives underlying this proceeding by enabling customers to access services directly using various Internet-enabled devices, including smartphones, iDevices and advanced televisions.^{15/}

Other commenters echo Cablevision’s view that investments in downloadable security and cloud-based capabilities and solutions can accomplish the Commission’s core goal of facilitating consumer access to programming via a broad array of devices and across multiple content delivery platforms.^{16/} Beyond Broadband Technology observes that “downloadable security may constitute a core technology that can act as an efficient, flexible, and effective mechanism for achieving most of the Commission’s stated goals, or at least provide a workable transition to them.”^{17/} Panasonic notes that cloud-based services today “can support third-party

^{13/} 47 U.S.C. § 549(a).

^{14/} *See, e.g.,* Comments of AT&T at 43-65; Comments of Verizon at 21-24; Comments of NCTA at 47-52; Comments of Time Warner Cable at 10-12.

^{15/} *See* Comments of Cablevision at 7-11, 23-24.

^{16/} *See* Comments of NCTA at 5, 11-12.

^{17/} Comments of Beyond Broadband Technology at 2 (filed July 13, 2010) (“Comments of Beyond Broadband Technology”).

access to MVPD services with no need for a mandated adapter.”^{18/} Motorola likewise states that it has introduced a cloud-based solution that allows service providers to deliver “the personalized media experience consumers desire to multiple screens on multiple devices.”^{19/} Cisco agrees that cloud-based offerings have the ability to “fully accommodate retail devices without the need for a particular hardware device.”^{20/}

Commenters caution against measures that could hamper the ability of MVPDs to accomplish the Commission’s goals via reliance on downloadable security and cloud-based offerings. Motorola notes that leveraging the cloud as a source of intelligence could increase “efficiency in service delivery and cost-effectiveness for both the provider and consumers, and the Commission should not foreclose that possibility.”^{21/} Beyond Broadband Technology offers that downloadable security “provides the greatest latitude and flexibility for broadband innovation.”^{22/}

As Cablevision detailed in its initial comments, an AllVid mandate would significantly hamper the company’s ability to continue to use the cloud to bring to fruition the multi-device, multi-platform environment sought by the Commission.^{23/} Commenters with considerable knowledge and experience in developing consumer equipment used by MVPD subscribers echo those sentiments, while squarely disputing Public Knowledge’s assertion that moving functionality into the cloud “is not a viable alternative to the AllVid model, but complementary

^{18/} Comments of Panasonic Corporation of North America at 9 (filed July 13, 2010) (“Comments of Panasonic”).

^{19/} Comments of Motorola, Inc. at 3 (filed July 13, 2010) (“Comments of Motorola”).

^{20/} Comments of Cisco Systems, Inc. at 34 (filed July 13, 2010) (“Comments of Cisco”).

^{21/} Comments of Motorola at 15.

^{22/} Comments of Beyond Broadband Technology at 13. By contrast, BBT suggests that an AllVid mandate would “establish less flexible sets of rules and standards . . . that could, in the future, constitute an unintended new barrier to innovation.” *See id.*

^{23/} Comments of Cablevision at 20-24.

to it.”^{24/} Motorola expresses concern that the Commission might adopt “a set of specifications for the AllVid device that prevents other MVPDs from using the cloud.”^{25/} It urges the Commission to move in the opposite direction, stating that: “Leveraging the cloud as a source of intelligence could lead to increased efficiency in service delivery and cost-effectiveness for both the provider and consumers, and the Commission should not foreclose that possibility.”^{26/} Cisco suggests that the Commission should consider compliant any MVPD that uses cloud-based solutions to grant retail devices full access to MVPD services, even if that MVPD does so without any particular mandated AllVid adapter.^{27/}

The key advantage of relying upon market-driven solutions such as downloadable security and cloud-based services to accomplish the Commission’s goals is that “innovation would in no way be impeded, because the entire design anticipates change.”^{28/} There is simply no way an AllVid adapter designed by committee can accommodate, let alone anticipate, change and innovation.

II. IMPOSING AN ALLVID MANDATE WOULD CURTAIL INNOVATION ON THE NETWORK AND HAMPER THE PROVISION OF ADVANCED SERVICES.

The Commission’s proposed AllVid mandate would curtail innovation by constraining the architecture of the broadband network – on one side – and the increased capabilities of “smart” viewing and navigation devices – on the other – to the limited capabilities of the

^{24/} Comments of Public Knowledge at n. 26.

^{25/} Comments of Motorola at 15.

^{26/} *Id.*

^{27/} Comments of Cisco at 34 (“To the extent that retail devices can still access the agreed-upon interface, [cloud-based] approaches should be considered to comply with the Commission’s AllVid rules”).

^{28/} Comments of Beyond Broadband Technology at 16.

“gateway,” and raise a host of other issues regarding costs, consumer convenience and content presentation and security.

In its initial comments, Cablevision noted its concern that an AllVid mandate would be a drag on innovation, by tethering the capabilities of any new service to the limited – and instantly outdated – capabilities of the AllVid. AT&T shares this concern, noting that under an AllVid mandate MVPDs “will only be able to introduce *new* services if they can squeeze them into a format that allows their delivery across the standardized interface,”^{29/} and that the proposal would “freeze today’s MVPD services in time,” thus harming consumers by slowing or even barring innovation that cannot be made to work with the common standard.^{30/} DIRECTV states that an AllVid mandate would “risk the production of devices that are effectively outdated upon introduction, as advances embodied in network data would always outpace Commission-mandated standards.”^{31/}

Commenters agree that the imposition of a standardized technology mandate will thwart the evolution of technologies and service offerings that can facilitate consumers’ use of third-party devices to access video programming across multiple platforms.^{32/} As TIA observes, there

^{29/} Comments of AT&T at 41.

^{30/} *Id.* at 38.

^{31/} Comments of DIRECTV at 14. *See also* Comments of Motion Picture Association of America at 4 (filed July 13, 2010) (“mandating nationwide standards at this time, as proposed in the *NOI*, would not serve the public interest. As a practical matter, technology is still evolving so rapidly in this area that any standard the Commission chooses will be quickly outdated, and consumers will be saddled with outmoded devices”) (“Comments of MPAA”).

^{32/} *See, e.g.*, Comments of HomeGrid Forum at 2 (Portions of the *NOI* “that suggest approaches and implementations for home networking severely curtails the hoped-for competition, and will limit the useful life of AllVid and MVPD products”); Comments of HomePNA Alliance at 4 (Stating that the Commission should “not overly mandate specific technologies and interfaces” and cautioning against “over regulation and over specification of technology”); Comments of ATIS at 6 (“The imposition of regulatory mandates could have the affect of inhibiting the very technical innovation the Commission seeks to spur with this *NOI*”); Comments of DIRECTV at 9 (noting the market’s progress in reaching the

are substantial risks that a technology mandate will inhibit innovation and harm consumers.^{33/}

Thus, even commenters that might benefit from a technology mandate recommend that the Commission refrain from taking such a step, due to the risks involved and the superiority of market forces to accomplish the Commission's goals.^{34/}

In addition to quelling innovation, an AllVid mandate would present multiple practical problems while offering little in the way of consumer benefit. For instance, Cablevision's initial comments pointed out that an AllVid mandate would increase the cost and complexity associated with the task of providing interactive services to subscribers. The proposal also lacks guidance on the manner in which MVPD interactive services will function with the AllVid, or how the adapter will process remote key instructions inputted in response to a viewer's live application. AT&T observes that "devising an interoperability solution that is compatible with all MVPDs' systems also will be substantially more complex and time consuming than the Commission assumes."^{35/} Time Warner Cable echoes these sentiments, noting that an AllVid mandate would

Commission's goal of a video programming "shopping mall" and stating that a "government mandate will almost certainly delay or disrupt progress toward the very outcome it seeks").

^{33/} Comments of TIA at 5-6 ("Picking technologies, as implementation of the AllVid could entail, carries with it the risk that the Commission will fail to predict which technologies will most enhance consumer welfare. In the context of this proceeding, the Commission threatens to make consumers worse, rather than better, off if it compounds the risks of a decision to mandate AllVid (which is unnecessary) by implementing it in a rigid way that precludes companies from employing approaches that may be equally or more effective than what the Commission envisions").

^{34/} Comments of Multimedia over Coax Alliance (filed July 13, 2010), at 4 ("It is preferable to allow the marketplace to determine which products and technologies best meet the needs of consumers. Where a free marketplace exists, the products that sell well in the marketplace are those that have features that consumers desire at a price they're willing to pay. Therefore, though the Multimedia over Coax Alliance has a specific technology which we believe *does* best meet consumers' needs, we do not suggest that the Commission adopt any"); Comments of the RVU Alliance at 5-6 ("If, in the interest of expediting market-driven negotiations and standards development, the FCC mandated at this early juncture the use of the RVU standard or a future DLNA Guideline, it would do so at the risk of disrupting these market driven collaborative activities. The FCC would best further its goals by maintaining a light touch, so as not to inadvertently slow the development of these technologies or force a "winner" to be selected and pushed to market prematurely.").

^{35/} Comments of AT&T at 3.

unduly complicate the task of delivering two-way services such as video on demand and switched digital, given that inserting a gateway device between the hardware and headend would “complicate that communication by requiring this dynamic information to be translated and relayed twice: once for delivery to the gateway, and again for delivery to the headend.”^{36/}

While AllVid supporters tout the proposal as “a simple idea” from a technology perspective, due to the growing prevalence of IP devices, the realities are far more complex. TIA notes that “despite billions of dollars of private investment in video and broadband delivery technologies,” not all video platforms “are IP-based.” Thus, continued innovation requires either “platform specific approaches or time-consuming development of platform-agnostic standards.”^{37/} Beyond Broadband Technology summarizes the challenges associated with implementing the AllVid proposal as follows:

[T]he Commission is not exploring just the daunting technical task of attempting to reach consensus on a single set of complex standards spanning multiple transmission (cable, broadcast, DBS, Internet, etc.), reception (television sets, DVRs, monitors, iPads and the like) and control systems (software, computers, embedded program guide products such as TiVo, “smart” television sets, “media centers” etc.), it is exploring designs that would require mandated standards which could force dramatic changes in the current business models of numerous affected industries. . . . [T]here is every reason to believe that the challenges posed by the “AllVid” proposal would be . . . daunting and time-consuming since the sheer scope of a proposal to marry the outputs of vastly different industries and technologies into one device that could then theoretically “pick and choose” among the component parts of what could be or was delivered presents numerous and complex questions not posed by the development of the Docsis modem or the adoption of a digital television standard - including questions relating to authority and jurisdiction, intellectual property and First Amendment issues.^{38/}

^{36/} Comments of Time Warner Cable, Inc. at 17 (filed July 13, 2010) (“Comments of Time Warner Cable”).

^{37/} Comments of TIA at 9.

^{38/} Comments of Beyond Broadband Technology at 9.

Given the complexities at hand, it is perhaps unsurprising that even AllVid proponents agree that the implementation challenges associated with the adoption of a standardized technology mandate are daunting.^{39/}

AllVid supporters also recognize that the proposed adapter mandate presents practical problems because it leaves unresolved the manner in which certain key functionalities and capabilities would operate. While AllVid proponents like Public Knowledge and Free Press tout the virtues of a “simple” device,^{40/} other AllVid supporters with actual experience in making consumer equipment say that the device will require more functionality in order to be useful. For example, Sony explicitly acknowledges that the capabilities of the AllVid envisioned in the *NOI* “do not describe all of the functionality that an AllVid gateway must support in order to succeed.”^{41/} Sony says that the AllVid also must support standards for: (a) advertising the available channels on the MVPD service to connected devices; (b) providing program-related metadata to connected devices; (c) transmitting remote-code or user-generated inputs from connected devices to the AllVid gateway to enable channel changes, content ordering for on-demand services and, perhaps, “trick-play” (i.e., pause, rewind, and fast-forward) functionality for streamed content; (d) remote user-interface functionality; and (e) transmitting parental-control and emergency-alert data.”^{42/}

^{39/} See Comments of Montgomery County at 5 (“The Commission’s target implementation date of December 31, 2012 is likely optimistic, based on past experience. Moreover, the Commission must not underestimate the difficulty of the task: designing a perfect technical solution applicable to all MVPDs is laudable and desirable, but it is also the approach that will take the longest to get to market, and there are bound to be legal challenges along the way”).

^{40/} Comments of Public Knowledge at 15; Comments of Free Press at 13 (filed July 13, 2010) (“Comments of Free Press”).

^{41/} Comments of Sony Electronics, Inc. at 14 (filed July 13, 2010) (“Comments of Sony”).

^{42/} *Id.* See also Comments of Intel Corporation at 7-8 (“the AllVid adapter must be able to communicate commands from the consumer’s choice of products and interfaces upstream to the MVPD. The commands to be communicated upstream from the AllVid adapter should include *all* commands

Similarly, Charter points out that to redesign on-demand, switched digital, electronic programming guides, interactive video enhancements, interactive advertising, caller ID on TV, and other modern services to pass through a “one-size-fits-all output would require developing new standardized protocols for almost every service” and that it is “unrealistic to expect that so many standardized protocols can be developed within the time frame expected by the Commission.”^{43/} Indeed, Cisco avers that the proposed “limit on the functionality of any device implementing the AllVid approach is the significant flaw in the AllVid proposal” and predicts that this “unjustified limit would effectively ‘silo’ video content away from voice and data content, hampering the very convergence the Commission desires.”^{44/} Other commenters, such as DIRECTV, note that a standardized AllVid mandate may in no way assure seamless interaction between a retail smart device and an MVPD’s network; instead “additional protocols would have to be developed to allow smart devices to interact with the network data sent to them.”^{45/}

pertinent to the set of services that the subscriber is entitled to receive or invited to purchase. Basic services, such as switching channels, must be enabled through the AllVid adapter, including requests upstream for channels available only by switched digital video. Commands that enable additional services such as pay-per-view, video-on-demand, rental, or purchase, also should be available to and from the network through the AllVid adapter”).

^{43/} Comments of Charter Communications Inc. at 7 (filed July 13, 2010) (“Comments of Charter”). See also Comments of Time Warner, Inc. at 9 (“Standardizing the output from MVPD networks through the gateway adapter, as suggested in the All-Vid proposal, could also prevent content creators and programmers from developing new distribution models, services, and functionalities that consumers demand. For example, certain technology standards proposed in the *NOI* would not support a robust set of important and emerging consumer uses and distribution models (*i.e.*, rentals, specific time or device parameters). The absence of these capabilities would effectively limit the options available to provide innovative services and functionalities for MVPD consumers”).

^{44/} Comments of Cisco at 18.

^{45/} Comments of DirecTV at 13-14 (“The Commission appears not to have meaningfully grappled with the critical question of compatibility between the smart device and the MVPD network”). DIRECTV also explains that the AllVid will add unnecessary complexity to efforts to provision new interactive functionality, such as features that display information feeds on the television screen. Comments of DIRECTV at 15-16 (noting it is unclear how AllVid gateways will be able to interact with smart devices to bring consumers interactive features “such as NASCAR Hotpass, The Wimbledon

The insights from Sony, Charter, DIRECTV, Cisco and others into the significant additional capabilities that would be necessary to make the AllVid anything other than a legacy millstone that thwarts innovation are fundamentally in conflict with the vision of the AllVid as an inexpensive and minimally functional device proffered by technology mandate proponents such as Public Knowledge and Free Press. These comments highlight the dilemma for the Commission in this proceeding: the AllVid may not be very useful unless it can incorporate a broader range of functionality than is envisioned in the *NOI*, but the AllVid becomes far more expensive, complex and difficult to standardize and design if it moves in that direction.

The AllVid proposal also ignores the realities of the marketplace for content, and the effect the technology mandate would have on the complex interactions between content providers, MVPDs and providers of electronic programming guide information. MVPDs obtain the majority of programming they offer through contracts with programming networks and other content owners which typically contain restrictions on how the MVPD may distribute the content and instructions on channel positioning and format. As NCTA observes, MVPDs “would be hard pressed to obtain rights in the first place if they had to permit redistribution of content to unlicensed retail devices without regard to these negotiated contract terms, or if they could not guarantee that devices would not replace the accompanying commercials or insert competing ads.”^{46/} AT&T similarly notes that an AllVid mandate would make it “uncertain whether MVPDs can ensure that programming is delivered as content owners desire.”^{47/} AT&T also notes that the AllVid proposal would “effectively authorize manufacturers to infringe on

Experience, the US Open Golf Experience, or DIRECTV SportsMix that display multiple feeds and other information on a single screen”).

^{46/} Comments of NCTA at 44.

^{47/} Comments of AT&T at 50.

MVPDs' protected copyright interest in their own service offerings," and the Commission has no authority to authorize such infringement.^{48/} In addition, Rovi, a leading provider of electronic programming guides to MVPDs, expressly notes that MVPDs typically are not free under their license agreements to make guide data available to third parties.^{49/}

Further, the AllVid mandate presents potential security issues that could make content more vulnerable to signal theft and unauthorized uses.^{50/} The mandate also could exceed the limits of licensing agreements that MVPDs enter into with content providers.^{51/} Further, content providers raise several important content presentation/formatting issues that could be adversely affected by an AllVid mandate.^{52/} Likewise, commenters also express concern that an AllVid mandate could hamper MVPD's from seamlessly providing important capabilities such as parental controls, emergency alerts, closed captioning and video description, as well as new

^{48/} Comments of AT&T at 51.

^{49/} Comments of Rovi Corporation at 6 ("If cable operators supply guide data to (otherwise unlicensed) retail devices, the operators would be in breach of their license obligations to Rovi with respect to the guide data").

^{50/} *See, e.g.*, Comments of MPAA at 4-5; Comments of AT&T at 33-36; Comments of Time Warner, Inc. at 10 ("[R]eliance on a single content protection technology significantly increases the likelihood that it will be compromised, which in turn creates unacceptable security risks and raises serious questions about renewability and revocation. Moreover, because the varying nature of security breaches may necessitate different remedies, reliance on a single remedy for all breaches would hinder the ability to respond in the most effective and efficient way").

^{51/} *See* Comments of AT&T at 32-33; Comments of MPAA at 7-8.

^{52/} *See* Comments of AT&T at 50-51; Comments of Time Warner, Inc. at 9 ("For example, the user interfaces in the All-Vid retail equipment may not respect the intended presentation of multichannel video content and in the process may damage the brands that consumers trust. Such interfaces could enable the comingling of legitimate content with unauthorized content from illegitimate online sources, giving illegal websites a veneer of authenticity that may confuse consumers. They could also significantly impact how consumers locate and select content sources, such as by promoting one particular source over another. Moreover, inappropriate content or commercials could be overlaid onto children's programming or premium ad-free environments, leading to confusion and potential compliance issues with applicable law and/or contractual obligations").

services such as HD 3D and first-run movies to video subscribers during early release windows.^{53/}

III. AN ALLVID DEVICE MANDATE WOULD IMPOSE EXTRAORDINARY COST AND INCONVENIENCE ON ALL MVPD CUSTOMERS THAT FAR OUTWEIGH POTENTIAL BENEFITS.

Even if the AllVid successfully supports the efforts of device vendors to display MVPD content on third-party devices for those consumers who wish to use them, there is no doubt that such a requirement would impose significant costs and inconvenience on all consumers, including on those consumers who have no interest in the advanced functionality enabled by the AllVid.^{54/} The Commission envisions that MVPDs would be required to use and include the cost of AllVid adapters in the cost of service in every household, and possibly for every device, that displays MVPD programming – including standard analog TVs, digital TVs, and other simple display devices that today may require no set top box or other device.^{55/} Even if one were to assume that the AllVid adapter were no more complex or costly than a simple DTA adapter on the market today – an assumption that is probably not realistic, as the comments from Sony and others highlight – the cost-based monthly lease rates for such a minimal device would still be in the neighborhood of at least \$0.50 per month. Even if an AllVid were no more expensive – again, a highly unlikely prospect – that would still entail a consumer cost in excess of \$1 billion per year (\$6.00 per year x 2 TV sets per household x 110 million TV households = \$1.2 billion). And that estimate does not even take account of the costs, noted by AT&T, associated with potential re-engineering of MVPD networks arising from the mandate to conform network

^{53/} See Comments of AT&T at 50; Comments of Charter at 8; Comments of Home PNA Alliance at 3-6.

^{54/} See, e.g., Comments of Dish Network at 13 (“There are inevitable economic implications to the AllVid approach. By separating out the proprietary and nonproprietary set-top box functions into two devices – the AllVid adapter and the smart video device – cost is inevitably added to the system”).

^{55/} *NOI* at ¶ 24.

functionalities to the AllVid's least common dominator capabilities.^{56/} In addition, some AllVid proponents want to go even farther, and make it more difficult for MVPDs to offer incentives and promotional pricing involving MVPD-supplied set-top devices, which would only add further to the consumer costs associated with this proposal.^{57/}

This new mandate from the Commission would also create consumer confusion and inconvenience that will result from the requirement to use two or more devices to get MVPD content to their televisions. As Massilon Cable points out, many consumers are not feature-conscious and would prefer to have fewer, rather than more, set-top devices in their homes.^{58/} Additional cables, remotes, vendors, manuals, power demands – and possibly new home wiring requirements – would make the AllVid adapter unpopular even in the homes that *want* to use third party devices, but in homes that just want to enjoy television, it would be intolerable.^{59/} Further, commenters agree that an AllVid mandate will significantly complicate issues regarding the servicing and maintenance of customer equipment.^{60/} NCTA notes the potential consumer confusion arising over ascertaining responsibility for “problems with access to content or basic device operation” and other customer service issues.^{61/} Some smart device providers may simply choose not to support all of an MVPD's offerings, thereby confusing and frustrating consumers who may not know the reasons why some services are unavailable to them and may be uncertain

^{56/} Comments of AT&T at 16.

^{57/} Comments of Public Knowledge at 9-10; Comments of Free Press at 10.

^{58/} Comments of Massilon Cable TV, Inc. at 2-4 (filed July 13, 2010).

^{59/} Comments of Cablevision at 21-22.

^{60/} See Comments of Cablevision at 21-22. Accord Comments of AT&T at 26-27 (AllVid mandate “would leave consumers with a frustrating and uncertain path to resolve service and equipment problems”).

^{61/} Comments of NCTA at 46.

about which entity is responsible for addressing that circumstance.^{62/} Retail device makers do not have an established infrastructure for service and trouble-shooting devices designed to receive MVPD programming, but MVPDs are unlikely to be schooled in the intricacies of every “smart device” connected to the network, or the manner in which it interoperates with the AllVid.⁶³ Given that there is no consumer demand for this solution, and that its prospect for success is uncertain, the Commission should refrain from imposing such a costly new tax on consumers.

CONCLUSION

For the foregoing reasons, the Commission should refrain from moving forward with its AllVid technology mandate and continue to let consumer preferences bring diverse platform and devices into the market.

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^{62/} Comments of DirecTV at 24-26.

^{63/} Comments of AT&T at 31-32;