

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

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

**REPLY COMMENTS OF THE  
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

William A. Check, Ph.D  
Senior Vice President, Science & Technology

Andy Scott  
Vice President, Engineering

Neal M. Goldberg  
Stephanie L. Poday  
The National Cable  
& Telecommunications Association  
25 Massachusetts Avenue, N.W. – Suite 100  
Washington, D.C. 20001-1431

Paul Glist  
Paul Hudson  
Davis Wright Tremaine LLP  
1919 Pennsylvania Avenue N.W., Suite 800  
Washington, D.C. 20006-3401

August 12, 2010

**TABLE OF CONTENTS**

	Page
EXECUTIVE SUMMARY .....	ii
I. RECENT DEVELOPMENTS CONFIRM THAT THE COMMISSION SHOULD RELY ON ONGOING CROSS-INDUSTRY COLLABORATIVE EFFORTS TO ACHIEVE ITS OBJECTIVES .....	2
II. ONE-SIZE-FITS-ALL TECHNOLOGY MANDATES WOULD STIFLE INNOVATION AND HARM CONSUMERS .....	7
A. The Record Demonstrates That the Proposed Standardized AllVid Approaches Would Not Work for Distributing, Networking, and Presenting MVPD Services .....	7
B. The Recommended Specifications for AllVid Adapters Would Fail to Support Many Present and Future Services .....	10
C. Consumers Would Suffer From Yet Another Integration Ban .....	15
1. A New Integration Ban Would Frustrate Consumers .....	15
2. A New Integration Ban Would Slow Innovation.....	17
D. Government Intervention Through Technology Mandates Creates Serious Economic Harm .....	20
E. The Proposed CE Technology Mandates Are Not Viable Marketplace Solutions .....	22
1. In Other Contexts, the Parties That Propose Technology Mandates Agree that Such Mandates Stifle Innovation .....	22
2. CE Interests Make No Commitments To Build AllVid-Compatible Devices Or Stock Them At Retail .....	27
3. Consumers Would Suffer from the CE Manufacturers’ Bid for Regulatory Leverage.....	29
III. LEGAL LIMITS TO COMMISSION AUTHORITY .....	30
CONCLUSION.....	36

## EXECUTIVE SUMMARY

The cable industry is committed to providing video content to consumers where and when they want it, on all possible consumer devices, and for those devices to be innovative platforms for new applications. We therefore share the goals underlying the *NOI*'s "AllVid" approach, and are committed to working with the Commission to enable more and better video device choices for consumers. Since no one can foretell the future course of technology or consumer demand (except that it will outrun our predictions), in reaching our common goals, it is essential that the Commission preserve the ability of all service and device providers to test and apply diverse solutions that can adapt to rapid changes in technology and consumer demand.

NCTA's initial comments emphasized the cable industry's support for the development of AllVid interfaces that consumers could use to connect retail navigation devices to any MVPD service as one of several options for consumers. We described many methods the cable industry is developing to deliver cable programming and services to personal computers and IP devices, share premium programming with retail devices in home networks, develop residential gateways, and work across industries on other creative solutions. In the brief time since the launch of this proceeding, the market has delivered even more solutions that transcend static technology mandates. One example is the announcement of the new UltraViolet digital rights system that offers consumers new ways to buy digital content from multiple vendors and have that content delivered by a variety of distributors to mobile phones, portable media players, PCs, game consoles, Internet TVs, and home networks. Another example is the recent successful interoperability testing demonstrating the ease with which tru2way set-top boxes can share premium content with retail TVs, game consoles, PCs, and mobile devices – even when the retail devices do not include tru2way. In addition, MVPDs have announced new plans to enable consumers to use iPads to view MVPD content and program DVRs. These successes reflect

flexible solutions arrived at through industry consultation, specifications development, and other private initiatives to meet consumer demand.

By contrast, the “adapter” approach being proposed by CEA/CERC, Sony, Public Knowledge, and TiVo has no grounding in the real world and is unripe from a technical, business, and consumer perspective. The comments from parties who design and operate video distribution systems, those who design video home networks, the major studios, and content suppliers all agree that the proposed standardized adapter would not deliver the MVPD services that consumers enjoy today and would create intractable barriers to future innovation.

The adapter approach fails to account for the critical end-to-end integration aspects of MVPD services, limits the permissible features and outputs of an AllVid adapter, and fails to assure that retail devices will support the features of an MVPD’s service offerings. As a result, an adapter approach would deprive consumers of many of the services they enjoy today as well as new services yet to be developed. For instance, such an approach would:

- undermine the efforts of programmers to “ensure a uniform nationwide presentation” of their content, to preserve the value of the brands they have built, and to stem the reach of counterfeit goods and inappropriate content;
- disable interactive enhancements content owners have built into their programming;
- defeat the mechanisms recently approved by the Commission for MVPDs to bring theatrical release movies to consumers’ televisions;
- deny consumers assured reception of broadcast, PEG, and cable channels delivered by cable operators in analog format;
- disable cross-platform interactive services like caller ID on television;
- fail to support switched digital video, the technology used to recover and repurpose cable spectrum for today’s high definition and high speed data services;
- defeat MVPDs’ efforts to assure quality of service in delivering video and to diagnose problems remotely;
- frustrate MVPDs’ ability to migrate to IPv6;
- fail to meet current throughput requirements for home networks; and

- ignore the content protection needed to secure programming inside retail devices, increase the likelihood that security on the AllVid adapter would be compromised, prevent MVPDs from revoking compromised devices, and disable the forensic tools cable operators use to detect compromised devices.

The adapter approach would not “leave an MVPD’s back-end infrastructure untouched,” as its proponents claim, but would simply discard those services and features that do not squeeze through the stripped-down adapter and the proposed AllVid architecture.

Even worse is the proposal for a new “integration ban” that would prohibit MVPDs from providing service except through the same stripped-down AllVid adapter, with all other functionalities reserved for connected downstream client devices. Consumers could no longer receive services with a single box as they do today. They would need two devices – an AllVid adapter and a separate AllVid compatible device – just to watch television. Some consumers may be eager to purchase more electronics and savvy enough to network them. But most have far less appetite than early adopters for complex or costly equipment, and rationally choose to lease a straightforward set-top box. However, a new “integration ban” would eliminate simple and cost-effective options for consumers, such as set-back boxes that work off the television remote control, or digital terminal adapters (DTAs) that provide a low-cost solution for consumers who are not seeking advanced functionality, and it would otherwise forbid MVPDs from making it easy for consumers to enjoy MVPD services.

A new ban also would prohibit technological advances. It would prohibit a “converged” gateway blending triple-play video, voice, and data services. It could effectively prohibit non-traditional means of delivering multichannel video services to video devices, such as wirelessly over 3G or 4G, from the cloud, or to an iPad. Virtually every new service and enhancement would require standardization and government approval before being deployed. A new ban would require that the Commission decide by waiver, on an *ad hoc* basis, whether to deny new

features to consumers because they are “too advanced” to include in an adapter. The Commission should not go down this blind alley yet again.

NCTA submitted a detailed study of the video devices market by respected economists which explains what economics literature calls the “blind giant” problem – the hazards associated with government efforts to standardize a rapidly evolving marketplace. While government decision makers may possess the power to establish a standard before a *de facto* or voluntary standard emerges, they lack the information needed to do so wisely. If such a government-mandated standard is imposed, it risks locking consumers into obsolete and/or inferior products. And in the process, firms that otherwise would invest and compete in the rapidly changing market, or collaborate to solve problems, instead expend resources arguing before government regulators trying to attain regulatory advantage.

What the adapter proponents actually seek is the disaggregation of MVPD services, not Congress’ goal of the retail availability of devices that can receive MVPD services. Extensive analyses by NCTA and numerous other commenters demonstrate that the Commission lacks authority to mandate disaggregation and that any such requirement would violate the Communications Act, as well as Constitutional, copyright, and other legal constraints.

Moreover, outside of this docket, proponents of the AllVid adapter argue that the government is ill-equipped to devise technology mandates, and that the market is far better than technology mandates to develop new digital video distribution models with industry support and agreed-upon content protection. We agree. Elsewhere, Public Knowledge decries “heavy-handed ‘tech mandates,’” that “could destroy ... new technology at birth” or “cripple” still nascent technology and urges the government to rely on “technological tools developed in the marketplace, not mandated by government.” CEA “strongly believe[s] it is not appropriate for

the government to be in the product design business down to the level of individual buttons and functions.” TiVo warns that “if Congress or the Commission chooses a particular technological implementation over other technically feasible alternatives, innovation will be choked off.”

TiVo’s President thinks it is “critical” that a cable operator be able to define its own user interface, the look and feel of its services, and the content it offers to subscribers, so that it can “frame that experience.”

Not one CE company makes any firm and enforceable commitment to build any AllVid-compatible device or to incorporate the necessary functionality in their devices to enable MVPD services to run. Not one CE retailer makes a commitment to stock or sell AllVid-compatible devices at retail. Not one CE manufacturer or retailer offers any answer to the Commission’s questions about the marketplace or the demands of consumers. What they seek are regulatory options and leverage for themselves, even if consumers are left holding the bag. Consumers have suffered from this before. CEA blocked the cable industry’s offer to sell consumers the set-top boxes they now lease. It opposed virtually every request for waiver to offer consumers more equipment choices. It opposed the deployment of switched digital video and low-cost digital terminal adapters – all tools critical to delivering more high definition video, more MVPD services, and better broadband Internet services. Even today, in the name of “common reliance,” some CE companies still demand that consumers continue to pay for equipping *all* leased boxes with CableCARDS – which serves no other purpose than to raise consumer costs.

The cable industry is committed to work constructively with the Commission to enable more and better video device choices for consumers. As is evident from recent breakthroughs, developing flexible solutions through inter-industry consultation, specifications, standards, and

other private initiatives is a far more promising path than government-mandated requirements for building a more vibrant retail market for video devices.

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

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

**REPLY COMMENTS OF THE  
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

The National Cable & Telecommunications Association (NCTA)<sup>1</sup> hereby submits its reply comments in response to the Notice of Inquiry (“*NOI*”)<sup>2</sup> in the above-captioned proceedings. As we said in our initial comments and reiterate below, the cable industry is committed to providing video services to consumers where and when they want it, on all possible consumer devices, and for those devices to be innovative platforms for new applications. We therefore share the goals underlying the *NOI*’s “AllVid” approach and are committed to working with the Commission to enable more and better video device choices for consumers. But because no one can predict the future course of technology or consumer demand, it is essential

---

<sup>1</sup> NCTA is the principal trade association for the U.S. cable industry, representing cable operators serving more than 90 percent of the nation’s cable television households and more than 200 cable program networks. The cable industry is the nation’s largest provider of broadband service after investing over \$160 billion since 1996 to build two-way interactive networks with fiber optic technology. Cable companies also provide state-of-the-art competitive voice service to more than 22 million customers.

<sup>2</sup> See *In re 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 4275 (2010) (“*NOI*”).

that the Commission leave marketplace participants with the flexibility to test and use diverse solutions that can adapt to rapid changes in technology, and respond to competition and consumer demand in reaching the goals that we all share.

**I. RECENT DEVELOPMENTS CONFIRM THAT THE COMMISSION SHOULD RELY ON ONGOING CROSS-INDUSTRY COLLABORATIVE EFFORTS TO ACHIEVE ITS OBJECTIVES**

In our comments and in the Consumer Principles described therein, the cable industry committed to supporting the ability of consumers to purchase retail devices and use them to access cable and other video content when and where they want it. Some commenters, however, continue to fundamentally misunderstand or misstate the cable industry's interest in these proceedings. For example, in urging the Commission to charge forward with one-size-fits-all technology mandates without regard for cross-industry collaboration and tangible marketplace progress, Free Press claims that "MVPDs and the electronics industry are competing industry segments whose success in the market for set-top boxes ultimately depends on the other's failure," and that "[n]egotiated policymaking in such a context is a recipe for a slow, contentious process."<sup>3</sup>

On the contrary, in a competitive MVPD market, set-top boxes are an enabler of our core service, which is video, not equipment. Consumer electronics ("CE") manufacturers are our partners and help make it possible for the cable industry to offer innovative new services that consumers can access on a wide range of devices, including older legacy televisions. We are not fighting with CE manufacturers over the division of an old pie; we are working with the CE industry, and want to work with the Commission, to deliver to consumers larger pies with new and better services from which all industries and consumers can benefit.

---

<sup>3</sup> Free Press Comments at 16.

This is why AT&T aptly states that “if left to its own devices, the marketplace will continue to make progress towards the development of industry standards that facilitate the development of commercially available devices that can access all MVPD services,” and that “[o]ver time, the collective interests of MVPDs and CE manufacturers should result in solutions that achieve that statutory goal while serving and respecting the interests of all parties, including consumers.”<sup>4</sup> However, as AT&T explains, one of the most vexing stumbling blocks to the realization of negotiated agreements is the looming prospect of additional regulation. AT&T and other IP-based cable operators were apparently on the verge of reaching agreement with CE manufacturers regarding the delivery of IPTV content over retail devices when CE elements abruptly changed course and decided to attempt to get terms more favorable to them through Commission mandates.<sup>5</sup>

The cable industry suffered similar delays in the last decade, when some CE manufacturers held out from agreeing to what eventually became the tru2way MOU while trying to persuade the Commission to impose their preferred solution on the cable industry. The prospect of regulatory intervention inevitably produces rent-seeking behavior that pulls parties away from more constructive relationships. Some seek mandates that would enable them to help themselves to other people’s property, such as proposals to disaggregate and unbundle retail cable services, or make free use of proprietary interactive programming guide data. Others seek artificial regulatory requirements that would force people to buy their products that otherwise would not succeed in an open market. Some propose eliminating all content protection, which

---

<sup>4</sup> AT&T Comments at 2.

<sup>5</sup> *See id.* at 2-3 (“the mere prospect that the Commission might force a solution that grants CE manufacturers the ability to replace MVPDs’ user interfaces with the manufacturer’s has undermined several years of industry negotiation and technological development by encouraging manufacturers to hold out for a regulatory solution rather than continue to negotiate in good faith a solution that protects the rights and interests of all parties.”).

would thwart distribution of high value content. So long as certain stakeholders believe that the Commission might actually try to convert MVPDs into common carriers and mandate technical requirements, solid cross-industry progress toward the Commission's AllVid goals is likely to be slowed.

The cable industry is committed to working constructively with the Commission to enable more and better video device choices for consumers. Unlike other MVPDs, we already offer a platform that allows CE manufacturers to build set-top functionality into their retail devices, have those devices interoperate with cable systems nationally, and also have them serve as multi-function, multi-sourced devices, delivering Internet content side-by-side with cable content, creating and managing home networks, and including gaming, widgets, and other features and functions. But while the cable industry has been deploying and supporting tru2way middleware through a nationwide footprint, it has not stopped to wait for retail manufacturers to implement tru2way. The cable industry has gone much further, testing and exploring models like TV Everywhere; leveraging Internet Protocol (IP) technology so that cable programming and services can be delivered to personal computers and other IP-enabled devices;<sup>6</sup> developing residential gateways;<sup>7</sup> reaching agreement in the Digital Living Network Alliance (DLNA) to allow recorded MVPD content to be shared within home networks; and working across

---

<sup>6</sup> In addition, cable content can also be accessed on personal computers through retail CableCARD devices such as the recently-released Ceton 4-tuner InfiniTV 4 PC Card. See Ceton Corp., *Multi-Stream Tuner Cards*, at <http://www.cetonecorp.com/products.php> (describing the Ceton InfiniTV 4).

<sup>7</sup> In addition to the development of gateways described in our prior comments, see NCTA Comments at 12, ARRIS recently announced that it would start field trials of a new IP home gateway later this year that would enable cable customers to distribute cable and other content to other devices in the home. See Todd Spangler, *Cable Show 2010: Arris Tees Up IP Gateway For Video*, MULTICHANNEL NEWS, May 12, 2010, available at [http://www.multichannel.com/article/452589-Cable\\_Show\\_2010\\_Arris\\_Tees\\_Up\\_IP\\_Gateway\\_For\\_Video.php](http://www.multichannel.com/article/452589-Cable_Show_2010_Arris_Tees_Up_IP_Gateway_For_Video.php); *Arris Will Start Field Trials of Its IP Home Gateway This Year*, COMM. DAILY, July 30, 2010, at 11.

industries in the Multimedia over Coax Alliance (MoCA), as we described in our initial comments.<sup>8</sup>

As another indication of the speed with which the cable industry is moving to meet growing consumer demand for access anywhere, anytime, on any device, several new developments have added more choices for consumers in the brief span of time of this Inquiry. First, the Digital Entertainment Content Ecosystem (DECE), a multi-industry consortium in which cable actively participates, announced the details of UltraViolet.<sup>9</sup> UltraViolet offers consumers new ways to buy and enjoy digital content without being confined in separate “silos” set by independent security systems, retailers, devices, or service providers. By purchasing an UltraViolet video from any number of retail sites, consumers can have the content delivered over multiple delivery systems including streaming, progressive download, and stored playback on a wide array of devices using different security. The same video can be viewed on multiple screens, such as mobile phones, portable media players, PCs, game consoles, Internet TVs, and home networks, while the UltraViolet system takes care of delivery in the proper resolution and security language of the particular device. Consumers will be able to create cloud-based UltraViolet accounts, which will include a digital rights locker and allow them to manage all of their UltraViolet-branded content, regardless of where it was purchased. Already, nearly 60 participants have joined the UltraViolet venture, including major retailers, content providers, CE manufacturers, set-top box suppliers, cell phone manufacturers, cable operators, chip suppliers, and security vendors.<sup>10</sup>

---

<sup>8</sup> See NCTA Comments at 11-14.

<sup>9</sup> See Press Release, Digital Entertainment Content Ecosystem (DECE) LLC, *Digital Entertainment Content Ecosystem Unveils UltraViolet™ Brand* (July 20, 2010), available at [http://www.uvvu.com/press/UltraViolet\\_Brand\\_Launch\\_Release\\_07\\_20\\_2010\\_FINAL.PDF](http://www.uvvu.com/press/UltraViolet_Brand_Launch_Release_07_20_2010_FINAL.PDF).

<sup>10</sup> See Ryan Nakashima, *Digital Movie Locker ‘Ultraviolet’ Nears Launch*, YAHOO! NEWS, July 20, 2010, at [http://news.yahoo.com/s/ap/20100720/ap\\_on\\_hi\\_te/us\\_tec\\_ultraviolet\\_movies](http://news.yahoo.com/s/ap/20100720/ap_on_hi_te/us_tec_ultraviolet_movies); *Digital Entertainment Content*

Second, CableLabs announced the successful conclusion of interoperability testing to implement one of the promises of the DLNA guidelines, namely the easy sharing and playback of stored content from cable set-top boxes to retail devices over a home network. Thirty-seven participants from eleven companies recently demonstrated the secure sharing of premium DVR content over a home network among multiple tru2way set-top boxes and a wide variety of DLNA devices, including Ethernet-enabled TVs, game consoles, PCs, and mobile devices on which the consumer may enjoy the content.<sup>11</sup> This approach underscores that the tru2way set-top boxes being deployed by the cable industry are capable of sharing premium content with a wide variety of retail devices – even devices which themselves do not include tru2way.

Third, Cablevision, Time Warner Cable and Comcast each recently announced their intention to deliver cable video services to networked devices such as the iPad.<sup>12</sup> DISH Network has also recently announced an application to enable an iPad to control DISH DVRs.<sup>13</sup> These new dynamic options for consumers further the ultimate goals of Section 629, but required the ability of MVPDs to develop solutions free from the tangle of government-imposed limitations.

---

*Ecosystem Unveils UltraViolet Brand*, BROAD. ENGINEERING, July 28, 2010, available at <http://broadcastengineering.com/automation/digital-entertainment-content-ecosystem-unveils-ultraviolet-brand-20100728/>.

<sup>11</sup> See Jeff Baumgartner, *Tru2way Flashes Some Retail Hope*, LR CABLE NEWS ANALYSIS, Aug. 4, 2010, available at [http://www.lightreading.com/document.asp?doc\\_id=195383&site=lr\\_cable&f\\_src=lrdailynewsletter](http://www.lightreading.com/document.asp?doc_id=195383&site=lr_cable&f_src=lrdailynewsletter;); *Tru2way Home Networking Event Demonstrates DVR Content Sharing Between Set Tops and DLNA Certified Devices*, MARKETWATCH.COM, Aug. 3, 2010, at [http://www.marketwatch.com/story/tru2way-home-networking-event-demonstrates-dvr-content-sharing-between-set-tops-and-dlna-certifiedr-devices-2010-08-03?reflink=MW\\_news\\_stmp](http://www.marketwatch.com/story/tru2way-home-networking-event-demonstrates-dvr-content-sharing-between-set-tops-and-dlna-certifiedr-devices-2010-08-03?reflink=MW_news_stmp) (“Set-top manufacturers were represented by ADB, Cisco, Samsung Electronics and Motorola. They worked together with DLNA Certified device manufacturers including Panasonic, Samsung Electronics, Sony, as well as with DLNA Technology Component vendors such as Microsoft and Cyberlink, as well as Irdeto, Myriad and NDS.”); see also Todd Spangler, *Canada’s Telus Pipes IPTV To Microsoft Xbox 360s*, MULTICHANNEL NEWS, Aug. 4, 2010, available at [http://www.multichannel.com/article/455665-Canada\\_s\\_Telus\\_Pipes\\_IPTV\\_To\\_Microsoft\\_Xbox\\_360s.php](http://www.multichannel.com/article/455665-Canada_s_Telus_Pipes_IPTV_To_Microsoft_Xbox_360s.php) (describing service provider in Canada enabling use of Xbox in lieu of secondary leased set-tops from service provider).

<sup>12</sup> Todd Spangler, *TWC Developing An iPad App For TV, Too*, MULTICHANNEL NEWS (Aug. 12, 2010), available at [http://www.multichannel.com/article/455968-TWC\\_Developing\\_An\\_iPad\\_App\\_For\\_TV\\_Too.php](http://www.multichannel.com/article/455968-TWC_Developing_An_iPad_App_For_TV_Too.php).

<sup>13</sup> *DISH Network Introduces World’s First DVR Scheduler App Optimized for the Apple iPad*, HDTV MAGAZINE (Aug. 6, 2010) available at <http://www.hdtvmagazine.com/news/2010/08/dish-network-introduces-worlds-first-dvr-scheduler-app-optimized-for-the-apple-ipad.php>.

Our initial comments explained that flexible solutions through industry consultation, specifications, standards, and other private initiatives can fulfill the Commission’s fundamental goals. As the examples above help illustrate, in just the brief time that this Inquiry has been underway, the market is growing in unexpected ways and delivering yet more solutions that will allow consumers to enjoy the benefits of continuous innovation from MVPDs, manufacturers of retail video devices, developers, and Internet and other creative video sources. In short, cross-industry efforts – efforts begun well before this proceeding was initiated – are already delivering market-driven solutions that are made possible by the absence of static technology mandates.

## **II. ONE-SIZE-FITS-ALL TECHNOLOGY MANDATES WOULD STIFLE INNOVATION AND HARM CONSUMERS**

Enabling more and better choices for American consumers and developing new approaches to the support of retail devices are far more complicated tasks than the comments of CEA/CERC, Public Knowledge, and certain other parties suggest. Supposedly “easy” plans proffered by these parties would deprive consumers of many existing and new services, and leave many key questions unanswered. By contrast, comments filed by every major party that operates as a video distributor, a designer of video home networks, or a content provider agrees that the oversimplified, disaggregation approach promoted by CEA/CERC and others would not be effective.

### **A. The Record Demonstrates That the Proposed Standardized AllVid Approaches Would Not Work for Distributing, Networking, and Presenting MVPD Services**

The comments from parties who design and operate video distribution systems have confirmed in detail what NCTA warned in its initial comments – the single standardized adapter mandate advocated by certain commentators fails to account for the critical end-to-end integration aspects of MVPD services, fails to deliver the MVPD services that consumers enjoy

today, and creates intractable barriers to future innovation.<sup>14</sup> Those who design video home networks explain that the proposed AllVid standard does not meet current throughput requirements for distribution of high definition (“HD”) video across home networks,<sup>15</sup> lacks the tools essential to provide consumers with quality of service or even to diagnose problems,<sup>16</sup> would not accommodate the transition to 3D HD;<sup>17</sup> and unnecessarily “risk[s] again inviting regulatory distortions in a technological environment that changes more rapidly than federal rules.”<sup>18</sup> They warn that after having invested billions of dollars in connected devices,

---

<sup>14</sup> See DIRECTV Comments at 10-18; DISH Network Comments at 4-9; Verizon Comments at 5-20; AT&T Comments at 26-43; Time Warner Cable Comments at 13-19; Charter Comments at 5-8; Cablevision Comments at 17-24.

<sup>15</sup> See HomePNA Alliance Comments at 5-6 (explaining that, while 100-BASE-TX Ethernet “may appear to provide enough bandwidth at least in the short term, the 90 Megabit per second (Mbps) speed required to support six streams of MPEG-2 data (nominally 15Mbps each) as described in the Notice is insufficient for a multi-node network after you take into account protocol factors such as loss from collisions (many designers will plan for 60% to 70% of the full network bandwidth).”); HomePlug Powerline Alliance Comments at 2 (“The cumulative and concurrent requirements of home networks in support of applications using multiple, connected video displays is already exceeding a network bandwidth of 100 Mbps.”); Multimedia Over Coax Alliance (MoCA) Comments at 4-6, 8 (explaining that Fast Ethernet was designed for data rather than live video and is more prone to latency and jitter when carrying HD video in comparison to MoCA, which has approximately twice the throughput); Entropic Comments at 1-2 (noting that using 100BASE-TX Ethernet as the physical layer connection is problematic because “most homes in the United States do not have structured wiring (i.e., CAT-5e or CAT-6) throughout the home, which means that a different physical layer network is used (for example, MoCA).” Thus, “a separate physical device with its own power, processing, and management” might be required. “Even more importantly, this approach precludes innovation in network performance.”); see also RVU Alliance Comments at 6-7 (“Standards that address the market demand for connectivity between MVPD services and 3rd party CE clients are rapidly advancing, not only within the RVU Alliance but in other forums such as the DLNA ... 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.”).

<sup>16</sup> See HomePNA Alliance Comments at 6 (expressing concern that a mandate to strip down an adapter to minimal functionality could preclude MVPD “ability to remotely manage and diagnose problems in the home network”); see also MoCA Comments at 5 (“[H]ome video networks need to support QoS. This is necessary to allocate resources to devices on the home video network. Home networks have typically been designed to support best effort data transmission, with dropped or lost packets being retransmitted in the event of network interruptions. However, real-time services such as video or VoIP cannot rely on lost packets being retransmitted.”).

<sup>17</sup> See HomePNA Alliance Comments at 3-6.

<sup>18</sup> Entropic Comments at 2.

“consumers will strongly resent being forced to replace home networking equipment with similar equipment that serves the same or a lesser function.”<sup>19</sup>

DLNA, on which the *NOI* proposes to rely, warns that because “the entire home digital entertainment ecosystem is both complicated and rapidly evolving,” “DLNA guidelines also include optional solutions where no one solution is appropriate in all situations ... [such as] multiple protection technologies, content formats, output interfaces, and IP transport protocols.”<sup>20</sup> DLNA emphasizes that permitting “[m]ultiple choices, and flexibility to adopt future choices, allow[s] manufacturers to cater to the marketplace and consumers.”<sup>21</sup>

Major content providers including MPAA, on behalf of Paramount Pictures Corporation, Sony Pictures Entertainment Inc., Twentieth Century Fox Film Corporation, Universal City Studios LLP, Walt Disney Studios Motion Pictures, and Warner Bros. Entertainment, Inc., have explained how the AllVid adapter approach would break the “chain of privity” in contracts and licenses that allow content owners to “ensure a uniform nationwide presentation” of their content and preserve the value of the brands they have built.<sup>22</sup> MPAA also explains how the AllVid adapter approach would allow commercials or inappropriate content to be overlaid on its members’ content, and allow “the purveyor of counterfeit goods to set up shop alongside respected brand-name retailers.”<sup>23</sup> The adapter approach also would disable the many enhancements content owners have built into their programming, such as “viewer polling and interaction through social networking to complement the viewing experience.”<sup>24</sup> “This could

---

<sup>19</sup> HomePNA Alliance Comments at 4.

<sup>20</sup> DLNA Comments at 5.

<sup>21</sup> *Id.* at 7.

<sup>22</sup> MPAA Comments at 8-9.

<sup>23</sup> *Id.* at 9.

<sup>24</sup> Time Warner Inc. Comments at 6.

ultimately undermine the ability of programmers to sustain the production of high quality content that consumers demand, and it could impair the brands that content producers and programmers work hard to create and sustain, and that consumers rely on and value.”<sup>25</sup>

The comments from programmers illustrate a profound difference between the distribution of pay television through licensed distributors and the distribution of programming over the Internet. In the distribution of pay television, programmers negotiate carriage agreements with distributors that typically include detailed terms surrounding channel position, tier placement, compensation, commercial placement, the scope of distribution permitted, security and presentation of the programmer’s content. MVPDs collectively pay about \$30 billion annually for high-value copyrighted programming licensed from content suppliers under thousands of individually-negotiated contracts and licenses.<sup>26</sup> By contrast, the content that program suppliers make available over the Internet through a cable modem is far more limited because those contractual arrangements are largely missing. Because the AllVid adapter approach fails to address these limitations, it does not meet the basic requisites for the distribution of MVPD programming.

**B. The Recommended Specifications for AllVid Adapters Would Fail to Support Many Present and Future Services**

In our initial comments, we emphasized the cable industry’s support for the development of AllVid interfaces that consumers could use to connect retail navigation devices to any MVPD service. We contrasted our proposed functional AllVid framework with the approach advanced by proponents of an AllVid adapter that would mandate the use of a particular, specified adapter or other device. Here, we again differentiate between recommending functions, which we

---

<sup>25</sup> *Id.* at 9.

<sup>26</sup> *See* NCTA Comments at 43-44.

support, and mandating the “adapter” approach proposed by CEA/CERC, Sony, Public Knowledge, and others, which we do not support.

The *NOI* suggested an incomplete adapter approach. Sony and others suggest that it would be easy to implement the AllVid adapter with off-the-shelf specifications within the timeframe sought by the National Broadband Plan.<sup>27</sup> Their recommendations make it even clearer that the adapter approach would harm consumers and stifle innovation. If their recommendations were imposed by the Commission, consumers would lose both MVPD services they are receiving today and the innovation they will expect tomorrow, because many current features are not within the permissible outputs of an AllVid adapter and because there is no assurance that retail devices will support the features of MVPD service.

For example, under the recommended specifications offered by CEA/CERC and Sony, consumers would lose any assured reception of broadcast, PEG, or cable channels delivered to consumer TV sets in analog by cable operators.<sup>28</sup> In fact, although AllVid is supposed to apply to all MVPDs, the recommended specifications offered by CEA/CERC and Sony appear to be directed exclusively to the reception of linear and on-demand digital signals (or parts thereof) from cable operators, rather than to receive video from any other source.<sup>29</sup> As a result,

---

<sup>27</sup> See, e.g., Sony Electronics Comments at 24 (“Assuming that the Commission moves quickly to enact AllVid regulations based on the standards referenced in the DLNA Guidelines as described herein, MVPDs should have no difficulty whatsoever in complying with a December 31, 2012, deployment deadline for AllVid gateway devices.”).

<sup>28</sup> Under the recommended specifications offered by CEA and Sony, there would be no NTSC or ATSC tuner in the adapter or in a retail client device. See CEA/CERC Comments at 14; Sony Electronics Comments at 23. With tuners being optional in retail client devices, cable systems would not be able to meet the Commission’s requirement to make analog channels “viewable” via cable on all television receivers, as is required pursuant to their signal carriage obligations. See 47 C.F.R. §76.55(d)(3).

<sup>29</sup> Under the recommended specifications offered by Sony, the AllVid adapter should output MPEG-2. See Sony Electronics Comments at 14-17, 20. Meanwhile, CEA would forbid the adapter from transcoding that signal. See CEA/CERC Comments at 6, 10, 11. There are multiple video formats, such as AVC-MPEG-4 (satellite), MPEG-2 (cable), VP8 (Google), VC-1 (Microsoft) and Theora (Mozilla), and not all retail devices support all formats. The proposed specifications address themselves only to MPEG-2 (cable).

consumers would lose, for example, the interactive “Shop by Remote” feature used today for the home shopping network HSN, the interactive features in Showtime and Weather Channel applications, and other innovative applications such as caller ID on television.<sup>30</sup> Switched digital video technology could no longer be used to recover and repurpose cable spectrum for today’s HD video and high speed data services.<sup>31</sup> No MVPD could guarantee Quality of Service in delivering video.<sup>32</sup> Stripping an AllVid adapter down to a dumb gateway would eliminate the ability to migrate to IPv6,<sup>33</sup> or offer a “converged” gateway blending triple-play video, voice, and data services.<sup>34</sup> Even when DLNA, TCP/IP, UPnP, MPEG-2, and HTTP are combined, they would not provide functional specifications or standards sufficient to deliver the MVPD services

---

<sup>30</sup> See, e.g., NCTA Comments at 36 (explaining how interactive applications, such as those introduced by Showtime and The Weather Channel, depend upon predictable “end-to-end service delivery architecture as a scalable common platform”).

<sup>31</sup> See Charter Comments at 5-6 (explaining that for SDV to achieve its purpose in recovering spectrum, it relies upon SDV client software in the customer device to look for tell-tale signs of viewer inactivity and to recover the channel if there is no viewer response to inquiry). The proposed AllVid specifications make no provision for these requirements. According to the recommended specifications offered by CEA/CERC, Sony, and Public Knowledge, “AllVid does not require that consumers be connected to the Internet to access MVPD content.” Public Knowledge Comments at 5. This confirms NCTA’s point in the Commission’s recent CableCARD FNPRM proceeding that TiVo’s suggested use of the Internet in order to signal SDV tuning in UDCPs is *not* a step towards AllVid, but an unnecessary diversion. See Comments of NCTA, CS Docket No. 97-80, PP Docket No. 00-67 (filed June 14, 2010) at 42-47 (“NCTA FNPRM Comments”); Reply Comments of NCTA, CS Docket No. 97-80, PP Docket No. 00-67 (filed June 28, 2010) at 23-27 (“NCTA FNPRM Reply Comments”). The proponents of an AllVid adapter now claim that no Internet connection will be required, so all of the engineering TiVo has called for to create an Internet backchannel for retrieving SDV channels would be irrelevant to AllVid.

<sup>32</sup> Under the recommended specifications offered by CEA/CERC, retail devices would control priority call on resources. See CEA/CERC Comments at 13. An AllVid device confined to lower-layer functions could not ensure QoS.

<sup>33</sup> CEA/CERC, TiVo, and Public Knowledge, and others would not permit AllVid adapters to perform anything other than specified functions. See CEA Comments at 6, 10; TiVo Comments at 10-11; Public Knowledge Comments at 15-17. Thus, as proposed, an AllVid adapter could not include a Network Address Translation (NAT) function which can bridge between IPv4 addresses and IPv6 addresses.

<sup>34</sup> Under the recommended specifications offered by CEA/CERC, TiVo, and Public Knowledge, an AllVid adapter may “solely” provide video and may not include any significant storage, any DVR, or any features they consider “redundant” to features in retail devices. See CEA/CERC Comments at 6, 10, 11; TiVo Comments at 8, 10-11; Public Knowledge Comments at 15-17. Cisco correctly notes that this serves as a barrier to providing converged devices, when the Commission is seeking to promote convergence. See Cisco Systems Comments at 17-18 (“This limit on the functionality of any device implementing the AllVid approach is *the* significant flaw in the AllVid proposal. This unjustified limit would effectively ‘silo’ video content away from voice and data content, hampering the very convergence the Commission desires.”) (emphasis in original).

that consumers enjoy today. The proposed AllVid specifications do not “leave[] an MVPD’s back-end infrastructure untouched,” as the proponents claim,<sup>35</sup> but simply discard those services and features that do not squeeze through the stripped-down adapter and proposed AllVid architecture.<sup>36</sup>

The recommended specifications offered by CEA/CERC and Sony also would jeopardize both the security and the availability of high value content on MVPD networks. None of the adapter proponents has volunteered *any* content protection for programming once it passes through an AllVid output and is received by a retail device via a DTCP-enabled interface. Moreover, none of the recommended specifications would permit an MVPD to communicate with, revoke, or deny service to compromised devices. Such an approach would break the chain of trust on which programmers rely to provide high value content to MVPDs and ultimately, to consumers.<sup>37</sup> Major content owners have repeatedly warned the Commission of this

---

<sup>35</sup> Public Knowledge Comments at 4.

<sup>36</sup> Likewise, proponents of the AllVid adapter approach are profoundly mistaken when they try to distinguish their proposal as a good “standard” rather than a bad “technology mandate.” *See, e.g.,* John Bergmayer, *Standards Good. Tech Mandates Bad*, PUBLIC KNOWLEDGE POLICY BLOG (Apr. 29, 2010), at <http://www.publicknowledge.org/node/3031>. The AllVid adapter approach does not call for a power jack. It calls for federal rules that deprive consumers of many of the services they enjoy today, require a complete dismantling and rebuild of system architecture, restrict the delivery of functionalities “reserved” for connected downstream client devices, prohibit technological advances, and frustrate firms seeking to invest and compete in the rapidly changing market. It would do exactly what Public Knowledge says would result from a “bad” technology mandate: “dictate the internal design or functionality of the devices that attach to it, or of MVPDs.” *Id.*

<sup>37</sup> The most protection offered by any of the adapter proponents involves the use of DTCP, but DTCP does not protect content once received by the linked device. *See* Sony Electronics Comments at 19-20 (“DTCP represents perhaps the best encryption and authentication technology currently available for use by the AllVid interface.”). *But see* NagraVision Comments at 8-9 (“While DTCP-IP is a good link protection technology, it is not a DRM. ... As implemented under the DLNA guidelines, DTCP-IP is specified only for ‘display-only’ use, enabling a networked display to receive streaming video from a DLNA source. ... Recently, many MVPDs are offering the ability to enjoy content received on one device, like a set-top box or a digital video recorder, to be available on other devices like PCs and mobile phones. DTCP lacks the ability to support these services to consumers. Moreover, DTCP does not have the capability to signal even content security aspects that the Commission had considered for years and recently granted: selectable output control.”). DTLA acknowledges that it may not support all business models, and may need to be augmented with other rights protection regimes. *See* DTLA Comments at 10, n.20 (“[F]or DTCP-IP to play a constructive role in integrating the AllVid adapter into the home network, DTCP-IP does not have to be the only accepted protection system.”). Public Knowledge argues that no content should be secured once inside the house. *See* Public Knowledge Comments at 11-12 (arguing against the implementation of “copy protection technologies” in AllVid rules). DTLA explains that DTCP certificates may be

problem.<sup>38</sup> In addition, the proposed approach makes no provision for more advanced offerings, including the mechanisms recently approved by the Commission for cable operators and other MVPDs to bring theatrical release movies to consumers' televisions.<sup>39</sup> MPAA explains that the AllVid proposal would jeopardize MVPD delivery of "the highest-value, early-release movies."<sup>40</sup> Time Warner Inc. emphasizes how "reliance on a single content protection technology [output from an AllVid adapter] significantly increases the likelihood that content will be compromised, which in turn creates unacceptable security risks and raises serious questions about renewability and revocation."<sup>41</sup> The adapter approach would also disable the forensic tools cable operators use to detect compromised devices.<sup>42</sup>

---

revoked only under very limited circumstances and procedures, and in fact DTLA has never revoked a unique device certificate in a compromised device. *See* DTLA Comments at 11-12 & n.22. As security firms explain, MVPDs must be able to revoke compromised devices. *See* Cryptography Research Comments at 2.

<sup>38</sup> *See, e.g.*, MPAA Comments at 7-8; Letter from Alicia W. Smith, Senior Vice President, The Smith-Free Group, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137, 09-191, CS Docket No. 97-80, MB Docket No. 08-82 (Dec. 22, 2009) (discussing *ex parte* presentation by Sony Pictures Entertainment Inc., including "views on security needed in the home environment in order to promote movement of copyrighted materials within a secure network between devices"); Comments of the MPAA *et al.*, CS Docket No. 97-80, PP Docket No. 00-67 (filed Aug. 24, 2007) at 3 ("MPAA urges the Commission to remain cognizant of the need to provide content creators with sufficient protection. No matter what types of devices may be deployed in the digital future, they must protect the ability of consumers to access high value content by providing for the legitimate needs of the content community to prevent misuse of its property.").

<sup>39</sup> *See In re Motion Picture Association of America's Petition for Expedited Special Relief; Petition for Waiver of the Commission's Prohibition on the Use of Selectable Output Control (47 C.F.R. § 76.1903)*, Memorandum Opinion & Order, 25 FCC Rcd 4799 (2010); NCTA Comments at 19; Charter Comments at 8; MPAA Comments at 7; *see also* Letter from Alicia W. Smith, Senior Vice President, The Smith-Free Group, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 10-91, CS Docket No. 97-80, PP Docket No. 00-67 (July 1, 2010) (discussing *ex parte* presentation by Sony Pictures Entertainment Inc. and explaining that DTCP may not provide enough flexibility). DTLA claims that it can now support selectable output control. *See* DTLA Comments at 9-10. However, there is no application or enforcement mechanism present inside the DTCP sink device that is required to respect any signal to turn off prohibited ports, and the *NOI* seeks to eliminate the necessary licensing obligations to impose such requirements.

<sup>40</sup> MPAA Comments at 7.

<sup>41</sup> Time Warner Inc. Comments at 10.

<sup>42</sup> Standard forensics requires awareness of suspicious "red flag" activities, such as modems engaged 24 x 7 x 365. If there are no communications allowed between an MVPD and client device, *see, e.g.*, Intel Comments at 5 ("The MVPD should not address communications between the adapter and any devices on the home network; that should be done through implementation of industry standards."), then these forensic tools would be unavailable.

### **C. Consumers Would Suffer From Yet Another Integration Ban**

Despite the overwhelming evidence that the Commission’s integration ban and “common reliance” policies have been unsuccessful, CEA/CERC and others urge the Commission to double down on those mistakes. They propose that the Commission enact a new, and in many ways even worse, integration ban that would prohibit MVPDs from expanding the limited functionalities that CEA/CERC would assign to the AllVid adapter with other functionalities that would be “reserved” for connected client devices and further propose that all MVPD-supplied devices commonly rely on the AllVid adapter.<sup>43</sup>

#### **1. A New Integration Ban Would Frustrate Consumers**

A proposal to require MVPDs to deliver all services in “common reliance” on such adapters would undermine, not promote, competition and consumer choice.<sup>44</sup> While NCTA supports the Commission’s goal of promoting the availability of retail devices, a sizeable number of consumers are likely to continue to prefer to lease devices from their MVPD.<sup>45</sup> The Commission should not repeat one of the mistakes of the CableCARD regime by hurting these consumers in the process of trying to help the separate (and smaller) group of consumers eager to purchase more electronics and savvy enough to network them. Among the principal reasons why some consumers prefer to lease devices is because they have far less appetite than early adopters for complex or costly equipment.

---

<sup>43</sup> See e.g., *id.* at 14-15.

<sup>44</sup> See e.g., *id.*

<sup>45</sup> See Letter from Neal M. Goldberg, Vice President and General Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 10-91, CS Docket No. 97-80, PP Docket No. 00-67 (July 19, 2010) (submitting MICHAEL G. BAUMANN & JOHN M. GALE, ECONOMIC ANALYSIS OF THE REGULATION OF MVPD NAVIGATION DEVICES (2010)) (“*Economic Analysis*”). In the paper, Baumann and Gale discuss at length their findings that there is “an affirmative consumer preference for leasing [navigation devices].” See *Economic Analysis* at 4-8; see also NCTA Comments at 24.

If a new integration ban prohibits MVPDs from providing an integrated device for any new installations, it would affect a much larger number of consumers than have ever shown an interest in buying their own retail devices and wiring them to their home networks. At the end of 2009, cable, DBS, and telco MVPD customers were using more than 175 million leased set-top boxes with their televisions.<sup>46</sup> If a new AllVid adapter integration ban were to be adopted, when these consumers using leased devices move households or switch providers, they would find that they could no longer receive MVPD services with a single box as they do today. These customers would now need two set-top devices – an AllVid adapter and a separate AllVid-compatible device – where they once had one. This second device could be a leased device or a device purchased at retail, such as an AllVid-compatible Ethernet TV. In either case, the customer would have to connect the MVPD’s AllVid adapter with the second device directly or over a home network. All of this would be required just to watch TV.

A new ban would have the practical effect of forbidding MVPDs from making it easier or less expensive for consumers to enjoy MVPD services. It would outlaw the low-cost digital terminal adapters (DTAs) that provide a low-cost solution for consumers who are not seeking advanced functionality when their service provider transitions to digital and wants to help consumers extend the lives of their televisions. It would also prohibit a simple set-back box with a video or HDMI output.<sup>47</sup> It would put the Commission back in the role of deciding, on a case-

---

<sup>46</sup> Mari Rondeli & Ian Olgeirson, *Set-tops Forecast to Proliferate in US market*, SNL KAGAN MULTICHANNEL MARKET TRENDS, Sept. 23, 2009, available at <http://www.snk.com/InteractiveX/article.aspx?CDID=A-10078809-13864&KPLT=2>.

<sup>47</sup> Under the recommended specifications offered by adapter proponents, HDMI or video outputs from the adapter would not be allowed. *See, e.g.*, Public Knowledge Comments at 6 (arguing that “the Commission must make common reliance a reality by ensuring that AllVid adapters do not have any interfaces or communications paths that bypass AllVid”); *id.* at 9, n.17 (“AllVid adapters cannot include any features (*e.g.*, direct video outputs) that allow MVPDs to bypass the basic AllVid functionality of making video content available on a home IP network.”); *id.* at 13, n.24 (“The set-back box approach . . . merely replicates the obsolete set-top box approach and fails to take into account the flexibility of home networking.”); *id.* at 16 (suggesting that “an AllVid adapter should only connect to home IP networks, and should not have any other video interfaces, such as HDMI”).

by-case basis, whether to deny new features to consumers because they are “too advanced” to include in an adapter. And if a customer called her cable operator for assistance or support, she would find that the diagnostic tools cable operators use today to remotely troubleshoot and assist customers have been disabled,<sup>48</sup> frustrating the customer and making it difficult for MVPDs to provide effective customer service. Some consumers may be eager to purchase more electronics and savvy enough to network them. But most have far less appetite than early adopters for complex or costly equipment, and rationally choose to lease a straightforward set-top box.

The purpose of Section 629 is to *increase* equipment options for consumers. In contrast, the proposals made by CEA/CERC and others would *curtail* those options and *deny* consumers the ability to choose the simplest, lowest-cost solution of leasing a single device from their MVPD. The Commission should be reject such proposals.

## **2. A New Integration Ban Would Slow Innovation**

A new integration ban also would undermine the flexibility MVPDs need to develop and launch innovative new services, functions, and consumer options. Just as competition among MVPDs has fueled rapid upgrades in networks and services,<sup>49</sup> MVPDs are competing today to deliver their services to retail devices. But “common reliance” would not allow cable signals to be delivered directly to an iPad, for example, without adding an adapter to the configuration.<sup>50</sup> It

---

<sup>48</sup> Under the recommended specifications offered by proponents, no communications would be allowed between an MVPD and a consumer’s device. *See, e.g.*, Intel Comments at 5.

<sup>49</sup> CEA claims that “it was only happenstance” that MVPDs upgraded their networks, services and devices to add attractive consumer features. CEA/CERC Comments at 12. But as the Department of Justice recently told the Commission, the truth is that it was a vigorous response to consumer demand that led to such upgrades: “the advent of DBS competition, which introduced digital delivery systems, has spurred cable companies to upgrade their facilities to include more channels, video-on-demand, HD programming, and personal video recorders.” *Ex Parte* Submission of the U.S. Department of Justice, GN Docket 09-51 (Jan. 4, 2010), at 16. Competition from telephone companies is promoting quality improvements as well. *See id.*

<sup>50</sup> Cablevision, for example, is the most recent to announce that it is testing technology to bring TV service to iPads and other home devices. *See* Josh Wein, *Cable Operators See IP Video Services Coming to Other Home Devices*, COMM. DAILY, Aug. 6, 2010, at 8 (“Cable operators are working on plans to provide more IPTV services to

would also be unlawful to deliver multichannel video via 3G or 4G wireless networks, or directly from the cloud, impacting the development of networked services to devices such as the iPad.<sup>51</sup> Every MVPD innovation would have to surmount formidable gauntlets. Any new service would need to be delivered via “open and publicly available standards,” which seldom exist for innovative new services and often take years to develop.<sup>52</sup> Alternatively, any new service would require amending or waiving Commission rules; a lengthy process that would delay innovation and prematurely force MVPDs to expose new business models to competitors. Since the proposed specifications cover only parts of linear and on-demand programming (and not interactive features), a Commission ruling would be required for virtually every new service and new enhancement before being deployed.<sup>53</sup>

---

new devices such as laptops and iPads when they’re used in a subscriber’s home, executives told investors Thursday on earnings calls. Time Warner Cable and Cablevision are both at work on new products along those lines.”).

<sup>51</sup> See Public Knowledge Comments at 14, n.26 (“moving functionality ‘into the cloud or network’ is not a ‘viable alternative’ to the AllVid model”); *id.* at 16-17 (“[T]he Commission should prevent the inclusion of any technology in the AllVid adapter that allows an MVPD to ‘work around’ AllVid networking, and create its own communications path for its own devices. For example, an AllVid adapter should only connect to home IP networks, and should not have any other video interfaces, such as HDMI. An AllVid adapter should not have any tuning ability, and should not be able to function as a traditional set-top box. These requirements are the only way the Commission can ensure that there is a single demarcation point between the home and the MVPD network that everyone uses, both MVPDs (with any devices they may lease or sell) and third-party competitors. Apart from the AllVid adapter itself, MVPD-supplied devices and software must have no privileged access to the MVPD’s ‘back end.’ ... The Commission must enact, strictly enforce, and not waive this requirement, because it is essential to the promotion of a competitive market for video devices.”). The recommended specifications offered by CEA/CERC and Sony are so hostile to allowing any flexibility in MVPD design that they would even require a Wi-Fi home gateway to include and support an unused Ethernet port, adding needless consumer cost. See Sony Electronics Comments at 16, n.16.

<sup>52</sup> Such a regime would hamstring the ability of companies to develop individualized services or partnerships, such as the recently-announced deal between Cox and TiVo that will enable TiVo Premiere users to access Cox video-on-demand services. Todd Spangler, *Operator to Give Retail DVRs Access to On-Demand Service*, MULTICHANNEL NEWS (Aug. 12, 2010), available at [http://www.multichannel.com/article/455967-Cox\\_Opens\\_VOD\\_Door\\_To\\_TiVo.php](http://www.multichannel.com/article/455967-Cox_Opens_VOD_Door_To_TiVo.php).

<sup>53</sup> Under the recommended specifications offered by Sony, all new services must be offered over “open and publicly available standards.” Sony Electronics Comments at 4. Under the recommended specifications offered by Intel, the Commission must amend its rules for 3D to be offered. See Intel Comments at 5. Under the recommended approach offered by Sony and DTLA, uniform standards would need to be agreed upon before new services could be offered. See DTLA Comments at 10 (“DTLA soon will release specification changes that will add, among other things, a ‘Copy Count’ function to enable the making of a specified number of copies of certain types of content. Further, DTLA can adapt DTCP to carry additional content management information, or incorporate additional capabilities and rules.”); Sony Electronics Comments at 4 (“allow MVPD service providers to add new features to

If the DBS operators had been subject to such restrictions, they could not have been the first movers in launching a “mosaic” technology displaying multiple simultaneous video feeds. By the time that technology could have passed through a standards process or Commission rulemaking or waiver proceeding, it would have been either commoditized or outdated. Likewise, technologies cannot evolve if every iteration requires standardization and rulemaking. In less than a year, for example, the 3D technology used by Comcast and other cable operators will have changed four times: it started in 1080i side-by-side; then shifted to 720p top and bottom; and is now adopting a new protocol to signal 3D and is switching to Advanced Video Coding. Other new variations such as 1080p top-and-bottom are also expected to be deployed soon. Cable operators were able to accomplish these changes because they could directly adjust their set-top devices as the technology evolved outside of any “standard,” an approach that would be prohibited under CEA’s version of AllVid.<sup>54</sup> Notably, the proposed specifications would not even support 3D today, let alone rapid changes in 3D. Some proponents carry this to an even further extreme, requesting Commission rules that would prohibit any MVPD innovation that outpaces deployed technology,<sup>55</sup> thus erecting a massive barrier to offering innovations to willing consumers.

When MVPDs are allowed to innovate rapidly and nimbly, consumers benefit. DBS offered MPEG-4, AT&T deployed U-Verse, and Verizon deployed a hybrid IP/QAM offering,

---

their services so long as they do so using open and publicly available standards. .... the Commission must require common reliance by all navigation devices, leased or retail, on a common technological solution.”).

<sup>54</sup> Likewise, CE manufacturers are rapidly developing and marketing 3D television sets and their proprietary, non-interoperable sets of 3D glasses without awaiting agreement on a fixed standard.

<sup>55</sup> TiVo suggests that MVPDs may still innovate to a limited extent, so long as their innovation does not “mak[e] existing retail devices less functional.” TiVo Comments at 3. Obsolescence is a fact of life in the CE business, and the Commission should not be placed in the role of protecting legacy devices from technological innovation in perpetuity. What would have happened to innovation if service providers were not allowed to innovate in a way that disadvantaged retail devices? Under the TiVo model, the iPhone, the Droid, and the evolution of networks from 3G to LTE, among other things, would not be permissible because each disadvantages existing retail devices.

without awaiting industry consensus, standards, or rule changes to redefine cable service. Likewise, Sony does not wait for mutual agreement with LG, Panasonic, or Samsung before adding a new DTV feature or launching a new version of the PlayStation console. If the right of invention had been derailed – as these recommended specifications would do – American consumers would still be waiting for all of the innovative and competitive video, broadband, and telephone services and features that MVPDs have delivered to date.

One lesson to be learned from past technology mandates is that prohibiting MVPDs from offering their own innovative, integrated products imposes massive consumer costs. The integration ban has cost cable consumers and operators over \$1 billion in unnecessary costs. Even today, in the name of “common reliance,” some CE companies still ask that consumers continue to pay for equipping leased boxes with CableCARDS – which would have no positive effect on the development of a retail market. The Commission should not take this counterproductive path yet again.

**D. Government Intervention Through Technology Mandates Creates Serious Economic Harm**

A key predicate for this Inquiry is the need to better understand the actual operation of the marketplace in meeting consumer demands. Competing MVPDs have offered detailed insight into how the current video marketplace is exploding with new options and choices for consumers, with even more choices, functionalities, and competitive service providers (including over-the-top providers) on the way. They have explained how MVPDs negotiate rights from content owners; how they choose content, lineups, marketing, and service look-and-feel options in order to deliver consistent customer care and compete as video retailers; and how that structure has fueled the transformation of the one-way analog cable industry into modern networks offering vast choices of digital channels, HD video, video-on-demand, digital video

recorders, interactive services, broadband Internet service of ever increasing reach and speed, and a choice in voice providers. It has led others to invest billions of dollars in new distribution platforms, so that consumers may now chose among cable, satellite, U-Verse, FiOS, and numerous “over the top” services. They have explained how AllVid, as envisioned by adapter proponents, would act as a barrier to such innovation, investment, and consumer choice.<sup>56</sup>

NCTA also has offered a detailed study of the navigation device marketplace undertaken by respected economists.<sup>57</sup> They explain the reasons why many consumers may prefer leasing set-top boxes from MVPDs rather than purchasing them at retail. In the case of the CableCARD, the vast majority of consumers made a rational choice not to buy UDCPs that worked only with one-way cable services, were not offered at low cost, required up- front payments, and required the consumer to assume the risk of obsolescence. Instead, consumers chose to lease devices that offered more services and the flexibility to swap boxes when the next model was released or return their device if they didn’t want service anymore. That is not market failure, as that term is used by economists. It is the operation of the marketplace and consumer demand.

The economists also explain a central hazard of government efforts to standardize a rapidly evolving marketplace in which no one can be certain about the future course of technology or of consumer demand. This is sometimes referred to in the economics literature as the “blind giant” problem, whereby at the time government decision makers possess the power to establish a standard before a *de facto* or voluntary standard appears in the marketplace, they lack the information needed to do so wisely. In today’s dynamic marketplace, companies invest substantial resources in competing technology and services to attract consumers. Companies can

---

<sup>56</sup> See generally Comments of NCTA, Charter, Cablevision, Time Warner Cable, Verizon, AT&T, DIRECTV, and DISH Network.

<sup>57</sup> See *Economic Analysis*.

develop and try new services, and compete through price and innovation. However, if a government-mandated standard is imposed, the standard runs a high risk of immediate obsolescence, and firms with innovative new devices must instead argue before government regulators at the expense of investing and competing in the rapidly changing marketplace.

The proponents of technology mandates in this proceeding remain tellingly silent about the economics of the marketplace. None offers anything except the hope that if rapidly evolving and competing MVPDs would just stop innovating, device manufacturers would have the *option* of building devices that could deliver some subset of these frozen and homogenized services. This is neither a serious economic analysis nor a very promising vision for innovation and competition. Technology mandates, in the end, create substantial barriers to innovation and competition, rather than promoting either.

**E. The Proposed CE Technology Mandates Are Not Viable Marketplace Solutions**

**1. In Other Contexts, the Parties That Propose Technology Mandates Agree that Such Mandates Stifle Innovation**

In our comments, we explained that specific technology mandates would stifle innovation and the development of new and improved services, and prevent MVPDs from being able to deliver services and functionalities that would be desired by consumers.<sup>58</sup> CEA/CERC, Public Knowledge, and TiVo take the opposite tack and ask the Commission to impose multiple layers of technology mandates on MVPDs including: specifying the technology used in an AllVid device, restricting the AllVid device from including certain technologies or functions, locking down innovation with standardization processes and Commission rules, and requiring MVPDs to use those particular AllVid devices to deliver all of their own video services to their customers.

---

<sup>58</sup> See NCTA Comments at 23-28, 33-47.

Outside of Commission proceedings, CEA, Public Knowledge, and TiVo offer quite a different view of the effect government-mandated design standards and other technology mandates have on innovation and consumers choice. In testimony, filings, interviews, and law review articles, they argue that the government is ill-equipped to devise technology mandates; that technology mandates destroy innovation; that cable operators must have the ability to define their user interfaces and the look and feel of the services and content they offer to subscribers; and that the market is far better than technology mandates in developing new digital video distribution models with industry support and agreed-upon content protection.

For example, not long ago, the President of Public Knowledge published an article decrying “heavy-handed ‘tech mandates’” that would “inject[] government into technological design” and “set[] in stone” specific technical requirements “for technologies that are constantly changing.”<sup>59</sup> She instead urged the Commission to rely on “technological tools developed in the marketplace, not mandated by government.”<sup>60</sup> She wrote that the Commission “has neither the resources nor the expertise” to engage in “dictating the marketplace for all kinds of electronics,” and that “[t]his type of government oversight of technology design will slow the rollout of new technologies and seriously compromise US companies’ competitiveness in the electronics marketplace.”<sup>61</sup> Thus, she concluded, government-imposed “[t]echnology mandates ... limit[] both innovation and consumer choice while increasing costs to innovators and consumers,”<sup>62</sup> and “could destroy ... new technology at birth” or “cripple” still nascent technology.<sup>63</sup>

---

<sup>59</sup> Gigi B. Sohn, *Don't Mess with Success: Government Technology Mandates and the Marketplace for Online Content*, 5 J. ON TELECOMM. & HIGH TECH. L. 73, 75-76, 83 (2006-07).

<sup>60</sup> *Id.* at 76.

<sup>61</sup> *Id.* at 77.

<sup>62</sup> *Id.* at 86.

<sup>63</sup> *Id.* at 78.

Ms. Sohn also explained that the Commission “has never exercised such ‘sweeping’ power over the design of a broad range of consumer electronics and computer devices,” and that its “hands-off approach ... has fostered a robust marketplace for electronic devices and has made this country a leader in their development and manufacture.”<sup>64</sup> She urged that rapid developments in the market made government intervention not only harmful, but far less effective than the market in developing new digital video distribution models developed with industry support and agreed-upon content protection: “The market for delivering content digitally over new technologies is working. Consumers can watch and listen to the content they purchase anytime and anywhere they want. ... All of these great developments happened without government intervention.”<sup>65</sup> She therefore concluded that “other new digital music and video distribution models, developed with content industry support and industry-agreed upon content protection, are emerging in the market,” and that these developments “make government intervention in the free market unnecessary.”<sup>66</sup>

Other proponents of an AllVid adapter mandate have expressed similar opposition to government technology mandates. CEA has repeatedly opposed government technology mandates that would dictate product design or user interfaces. CEA President Gary Shapiro recently testified to Congress that if development were bound to standards, “the innovation of new products and services would slow to a halt” and CE manufacturers would be deprived of needed “flexibility to develop new products that address the needs of all consumers.”<sup>67</sup> He

---

<sup>64</sup> *Id.* at 76.

<sup>65</sup> *Id.* at 74.

<sup>66</sup> *Id.* at 85.

<sup>67</sup> *Hearing on H.R. 3101, the Twenty-First Century Communications and Video Accessibility Act of 2009 Before the Subcomm. on Communications, Technology & the Internet of the H. Comm. on Energy & Commerce, 111th Cong. (June 10, 2010) (Statement of Gary Shapiro, President and CEO, Consumer Electronics Association) at 5.*

explained that CEA “strongly believe[s] it is not appropriate for the government to be in the product design business down to the level of individual buttons and functions.”<sup>68</sup>

Mr. Shapiro also testified that Congress’ mandate of a proprietary V-Chip technology “result[ed] in expensive and time-consuming litigation” and that “[i]nnovation in parental control technology has happened through market forces entirely outside of the congressionally mandated v-chip solution.”<sup>69</sup> He thus reached a conclusion remarkably similar to NCTA’s initial comments in this proceeding – that “the role of [government] is to say here is what we are asking you to do, here are the goals we are trying to reach and go get it, go work with industry and the [] community and come back [with] a proposal that will meet these very specific goals.”<sup>70</sup> As another CEA official recently explained, CEA opposes mandates that dictate functionality, because it believes Congress should “leave innovation to the innovators.”<sup>71</sup>

CEA has also rejected suggestions that new services must be designed to work within the constraints of existing devices in consumer homes.<sup>72</sup> And Mr. Shapiro has repeatedly disclaimed

---

<sup>68</sup> *Id.* at 4.

<sup>69</sup> *Id.* at 3.

<sup>70</sup> *Hearing on H.R. 3101, the Twenty-First Century Communications and Video Accessibility Act of 2009 Before the Subcomm. on Communications, Technology and the Internet of the H. Comm. on Energy and Commerce, 111th Cong. (June 10, 2010) (testimony of Gary Shapiro, President & CEO, Consumer Electronics Association), Preliminary Transcript at 63, available at <http://energycommerce.house.gov/documents/20100610/transcript.06.10.2010.cti.pdf>.*

<sup>71</sup> Adam Bender, *CEA Still Has Concerns About Internet Accessibility Legislation*, COMM. DAILY, July 15, 2010, at 12 (quoting concerns by Jason Oxman, a senior vice president of CEA, over the imposition of technical requirements in disabilities legislation).

<sup>72</sup> As Mr. Shapiro said of the DTV transition: “Think about it: you buy a television 15 years ago. Why do you have the constitutional right that it’ll last forever? Any other product you use you know that it’s likely to break down, service will be stopped. That’s just the risk you take. Hell, I signed up for ClearPass to get through airports three months ago and a month after I signed up it went out of business. I wasn’t thrilled, but that’s the risk you take.” Erica Ogg, *Reflecting on the DTV Transition*, CNET NEWS, Aug. 4, 2009, at [http://news.cnet.com/8301-1001\\_3-10303225-92.html](http://news.cnet.com/8301-1001_3-10303225-92.html). Mr. Shapiro elsewhere elaborated on how allowing technologies to emerge and to fail is part of an economic process that gives consumers better, faster and less expensive technology choices, that forces market players to adapt to the changing demands, and that creates new jobs. “In the technology industry, failure has been a powerful force for advancement. Technologies are displaced as newer, better ones emerge to meet the changing needs of consumers and our society. The VCR gave way to DVD players, which in turn have been challenged by Blu-ray devices and Internet streaming. The beneficiaries of these failures are consumers and by

any intention of “asking for special favors or tax treatment or benefits from Congress.”<sup>73</sup>

Instead, he has expressed full confidence that CE manufacturers will continue to “thrive[] nicely through the free marketplace of innovation.”<sup>74</sup>

And even in the very same comments in this proceeding in which CEA urges the Commission to impose detailed technical specifications on MVPDs, it turns around and opposes similar invasive regulations for its own devices in the home networking space. CEA states that “[t]here are ample private sector resources devoted to developing home networking standards” and that it “should not be necessary, in any case, for the FCC to undertake to invent, or cause to be invented, any enabling technology.”<sup>75</sup>

Likewise, TiVo has warned that “the Commission should not require the use of any particular technology,” but that instead “companies should be free to choose and/or develop technologies that meet general objective criteria,”<sup>76</sup> and that “if Congress or the Commission chooses a particular technological implementation over other technically feasible alternatives,

---

extension, the economy itself.... For the technology industry, creative destruction forces even the most established players to adapt to the changing demands of the market or risk fading away. The American economy and consumers have historically benefited from this perennial cycle of improvement. Innovations get better, faster and less expensive for consumers. Meanwhile, more jobs are created to make room for new opportunities and evolving consumer demand.” Gary Shapiro, *Here’s How To Deepen the Recession*, CBS NEWS, July 23, 2009, at <http://www.cbsnews.com/stories/2009/07/22/opinion/main5180932.shtml>.

<sup>73</sup> Gary Shapiro, *Fundamental Truths Meet Political Lies*, VISION, July/Aug. 2010, at 2, available at <http://www.nxtbook.com/nxtbooks/cea/vision0710/#/4> (“CEA is unique in never asking for special favors or tax treatment or benefits from Congress, and our industry has thrived nicely through the free marketplace of innovation, giving consumers what they didn’t even know they wanted.”); see also Erica Ogg, *Reflecting on the DTV Transition*, CNET NEWS, Aug. 4, 2009, at [http://news.cnet.com/8301-1001\\_3-10303225-92.html](http://news.cnet.com/8301-1001_3-10303225-92.html) (quoting Gary Shapiro as saying that “we have a position that we believe in the free market and we don’t think we should be asking government for special favors for our industry”).

<sup>74</sup> *Fundamental Truths Meet Political Lies*, supra note 73 at 2.

<sup>75</sup> CEA/CERC Comments at 7; see also Sony Electronics Comments at 26-27 (urging the Commission to avoid dictating minimum functionality requirements for device classes).

<sup>76</sup> Comments of TiVo Inc., MB Docket No. 02-230 (filed Dec. 6, 2002) at 7-8 (arguing against specific technology mandate for a broadcast flag regime).

innovation will be choked off.”<sup>77</sup> TiVo’s President has explicitly supported a cable operator’s ability to define the user interface, look and feel of the services and content it offers to subscribers, explaining that “[w]hat we think is critical is that the cable operator be in a position to frame that experience.”<sup>78</sup>

Public Knowledge, CEA, and TiVo had it right the first time – government technology mandates stifle innovation. Particularly when dealing in a technology area that changes by the day, government mandates would end up limiting, not expanding, consumer choice.

## **2. CE Interests Make No Commitments To Build AllVid-Compatible Devices Or Stock Them At Retail**

Supporters of the adapter approach offer the Commission mere talking points, not workable solutions that enjoy the committed support of mutually interdependent industries. This is not the first time. The Commission first requested a comprehensive “two-way” cable solution in 2005. CEA put forward and then abandoned a skeletal proposal in November 2005; put forward yet another proposal in November 2006 that it later conceded was incomplete; and in its third attempt in 2007, presented an approach similar to its AllVid proposal which it called “DCR+.”<sup>79</sup> DCR+ was also billed as a seemingly simple way to make today’s interactive digital cable content as easily accessible as one-way unenhanced analog broadcasts. Public Knowledge

---

<sup>77</sup> Comments of TiVo Inc., MB Docket No. 09-194 (filed Feb. 24, 2010) at 7.

<sup>78</sup> Todd Spangler, *Suddenlink Turns to TiVo*, MULTICHANNEL NEWS, July 8, 2010, available at [http://www.multichannel.com/article/454554-Suddenlink\\_Turns\\_To\\_TiVo.php](http://www.multichannel.com/article/454554-Suddenlink_Turns_To_TiVo.php). As TiVo develops co-branded solutions with individual cable operators, it has also told investors that TiVo is “develop[ing] a TiVo application that is truly compatible with the tru2way stack.” *TiVo Inc. Q1 2010 Earnings Call Transcript*, SEEKING ALPHA, May 27, 2009, available at <http://seekingalpha.com/article/139973-tivo-inc-q1-2010-earnings-call-transcript?part=qanda>.

<sup>79</sup> See Comments of CEA, CS Docket 97-80 (filed Aug. 24, 2007). The proposal was critiqued in detail by NCTA. See Comments of the National Cable & Telecommunications Association, CS Docket No. 97-80, PP Docket No. 00-67 (filed Aug. 24, 2007); Reply Comments of the National Cable & Telecommunications Association, CS Docket No. 97-80, PP Docket No. 00-67 (filed Sept. 10, 2007); Letter from Neal M. Goldberg, Vice President & General Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80, PP Docket No. 00-67 (Oct. 30, 2007); Letter from Neal M. Goldberg, Vice President and General Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80, PP Docket No. 00-67 (Nov. 1, 2007); see also Further Reply Comments of the National Cable & Telecommunications Association, MB Docket 07-269 (filed Aug. 28, 2009).

endorsed the approach as “superior.”<sup>80</sup> But when DCR+ was analyzed by engineering professionals with a real understanding of MVPD networks and services, it proved to be unworkable. Within 18 months, every major CE manufacturer had abandoned the proposal and signed the tru2way MOU.

When CEA and others sought to revisit the industry two-way solution in their comments to the Commission regarding the National Broadband Plan, NCTA warned that these “proposed solutions are so lacking in detail, and fail to address so many key issues, as to be wholly unworkable even as a voluntary option, much less a regulatory mandate to the exclusion of other approaches.”<sup>81</sup> As before, the “solution” now touted by CEA and others is illusory. Claims that “MVPDs should have no difficulty whatsoever in complying with a December 31, 2012 deployment deadline for AllVid gateway devices”<sup>82</sup> are wishful thinking.

Supporters of the adapter approach also fail in perhaps the most telling way – they offer no enforceable commitment of their own. The development of a retail market can only succeed with the committed support of four mutually interdependent industries: MVPDs, CE manufacturers, CE retailers, and content owners, all working to meet actual consumer demand. Not one CE company makes a firm and enforceable commitment to build any AllVid-compatible devices or to incorporate any necessary functionality in their devices to enable MVPD services to run on such devices.<sup>83</sup> Not one CE retailer makes a commitment to stock or sell AllVid-compatible devices at retail. Not one CE manufacturer or retailer offers any answer to the Commission’s questions about the video device marketplace or the demands of consumers.

---

<sup>80</sup> Comments of Public Knowledge *et al.*, CS Docket 97-80 *et al.* (filed Aug. 24, 2007) at 2.

<sup>81</sup> Reply Comments of the National Cable & Telecommunications Association on NBP Public Notice # 27, NBP Public Notice #30, GN Docket Nos. 09-47, 09-51, 09-137; CS Docket No. 97-80 (filed Jan. 27, 2010) at 11-12.

<sup>82</sup> Sony Electronics Comments at 24.

<sup>83</sup> *See, e.g.*, TiVo Comments at 11 (“FCC rules already contain sufficient device mandates.”).

What they do seek is the imposition not only of technology mandates on MVPDs (under which they themselves could never operate) but also regulatory *options and leverage* for themselves, even if consumers are left holding the bag.

### **3. Consumers Would Suffer from the CE Manufacturers' Bid for Regulatory Leverage**

Consumers have suffered from CEA's approach before. In a 2001 "retail initiative," the cable industry offered to sell consumers the set-top boxes they now lease, and to buy them back if the consumer was moving to another home or to another MVPD where that set-top box would not work. This would have addressed concerns over how much or how long consumers pay for leased boxes.<sup>84</sup> CEA/CERC blocked that initiative at the Commission.<sup>85</sup> Later, the cable industry sought leave to continue to lease low-cost boxes with integrated security.<sup>86</sup> CEA convinced the Commission to close down that option, opposed virtually every request for waiver to offer consumers more choices, and saddled cable consumers with extraordinary and unnecessary costs.<sup>87</sup> CEA then threw roadblocks in front of the deployment of switched digital video,<sup>88</sup> which, like the low-cost digital terminal adapters CEA also opposed, is a tool critical to delivering more HD, more MVPD services, and better broadband. Even today, in the name of "common reliance," some CE companies still ask that consumers continue to pay for equipping *all* leased boxes with CableCARDs, even though it is now clear that such continued imposition

---

<sup>84</sup> See Public Knowledge Comments at 10; Montgomery County Comments at 7-8.

<sup>85</sup> See Letter from Robert Sachs, President & CEO, National Cable & Telecommunications Association, to the Honorable Michael K. Powell, Chairman, FCC, CS Docket 97-80 (Oct. 10, 2001); Consumer Electronics Retailers Coalition, Reply To The NCTA Letter As To "Retail Set-Top Initiative" And To The NCTA Response To CERC Status Report "J2K Plus 1," CS Docket 97-80 (Nov. 6, 2001).

<sup>86</sup> See, e.g., National Cable & Telecommunications Association Comments, CS Docket No. 97-80 (filed Feb. 19, 2004); Comcast Corporation's Request for Waiver of 47 C.F.R. § 76.1204(a)(1), CSR-7012-Z, Request for Waiver (Apr. 19, 2006).

<sup>87</sup> CEA has opposed virtually every type of waiver sought by cable operators, such as waivers to allow for downloadable security (Cablevision, CSR-7078-Z), low-cost DTAs (e.g., Evolution Broadband, CSR-7902), and low-cost set-top boxes to enable transitions to all-digital systems (e.g., BendBroadband, CSR-7057).

<sup>88</sup> See, e.g., CEA/CERC FNPRM Comments (June 14, 2010) at 15-18.

of the integration ban serves no purpose other than to raise consumer costs.<sup>89</sup> The Commission should not acquiesce in CEA's self-interested game plan by adopting new technology mandates and a new integration ban that prevents MVPDs from providing consumers with the devices and functionality they want. Such mandates would provide CE manufacturers with regulatory leverage to the detriment of consumers.

### **III. LEGAL LIMITS TO COMMISSION AUTHORITY**

Public Knowledge candidly admits that its AllVid goal is the disaggregation of MVPD services, rather than Section 629's goal of the retail availability of devices that can receive MVPD services: "MVPDs ... would prefer that competitive devices act as mere clients that display content in a way chosen by the MVPDs. [Instead,] MVPDs should make their content available over the home network, but they should not 'present' it."<sup>90</sup> Not only does Public Knowledge ignore the original purpose of Section 629 in making such an unsupported demand, it fails to respond to the *NOI*'s request for comment on the legal limits of the Commission's authority to redefine MVPD service as piece parts of linear and on-demand programming to be disassembled, stripped of features, and given over to editing, modification, overlay, control, and integration with new menus and new services by independent device manufacturers.

By contrast, extensive analyses submitted by many other parties agree that the Commission lacks that authority and that such an exercise would violate the Communications Act, as well as Constitutional, copyright, and other legal constraints. As AT&T explains, the disaggregation proposals could not survive intermediate First Amendment scrutiny. These proposals would directly interfere with the *way* in which the MVPD prefers to speak, "disabl[ing] AT&T and other MVPDs from controlling the message 'spoken' to customers of

---

<sup>89</sup> See, e.g., *NCTA FNPRM Comments* at 47-53.

<sup>90</sup> Public Knowledge Comments at 17.

their services, and put[ting] that control into the hands of independent manufacturers.”<sup>91</sup> They would infringe rights of commercial speech, including a service provider’s “selection and arrangement of programs, its organization of menus, and its choice of particular applications, features, and services [that] are designed to maximize the quality of [its] service.”<sup>92</sup>

In addition, the disaggregation proposals are not tailored to meet an “important or substantial government interest.” The government interest that Congress sought to advance through Section 629 was to facilitate the ability of consumers to use retail devices to receive an MVPD’s services on third party devices<sup>93</sup> – not to change and unbundle those MVPD services. This approach stands in marked contrast to the provisions in the same Act that established highly detailed plans for the unbundling of certain incumbent local exchange carrier networks.<sup>94</sup> Congress limited the Commission’s authority even more, barring the Commission from “impos[ing] requirements regarding the provision or content of cable services,” not expressly set forth in Title VI,<sup>95</sup> and prohibiting the Commission from imposing any type of common carrier regulation on a cable operator’s provision of cable services.<sup>96</sup> Any “government interest” assigned to the Commission under Section 629 can be satisfied with far more tailored approaches. There also is no evidence that the proposed approach is tailored to promote broadband; what is offered is “pure speculation,” which is completely insufficient to sustain such

---

<sup>91</sup> AT&T Comments at 59.

<sup>92</sup> *Id.* at 61.

<sup>93</sup> Section 629 was intended to allow equipment to receive MVPD services, not to receive some supplemental or derivative service that a CE manufacturer may wish its product to provide. *See Gemstar Int’l Group, Ltd.*, Memorandum Opinion and Order, CSR 5528-Z, CSR 5698-Z, 16 FCC Rcd 21531, 21542, ¶ 31 (2001).

<sup>94</sup> *See* 47 U.S.C. §§ 251-252, 271.

<sup>95</sup> *See* 47 U.S.C. § 544(f)(1) (Section 624(f)(1) bars any “Federal agency, State, or franchising authority” from “impos[ing] requirements regarding the provision or content of cable services, except as expressly provided in [Title VI].”).

<sup>96</sup> *See* 47 U.S.C. § 541(c) (“Any cable system shall not be subject to regulation as a common carrier or utility by reason of providing any cable service.”).

a rule under the First Amendment.<sup>97</sup> The approach would fail as well under the Fifth Amendment, as a taking without compensation that “goes further than anything the Commission (or Congress) envisioned even under the heavily regulatory unbundled network element (“UNE”) regime.”<sup>98</sup>

As Time Warner Cable observed, Congress’ explicit purpose in enacting Section 629 was limited to facilitating a retail market for equipment that receives an *MVPD’s services*.<sup>99</sup> A disaggregation mandate, however, would prevent consumers from receiving those services. In addition to the plain text of the statute, Congress made clear that the Commission should not pursue initiatives that have the effect of freezing or chilling the development of new technologies, which would be another inevitable consequence of disaggregation.<sup>100</sup>

The disaggregation proposals also are inconsistent with copyright protection requirements. As Rovi explains, the programming guide data to which several AllVid proponents wish to help themselves is protected under copyright law.<sup>101</sup> Rovi’s predecessor Gemstar advised the Commission in 2007 that guides necessarily require creative expression and are protected by copyright.<sup>102</sup> In 2008, CE manufacturers agreed to the tru2way MOU that was respectful of that copyright.<sup>103</sup> Rovi and others have explained in detail the copyright protections

---

<sup>97</sup> See AT&T Comments at 63 (citing *Edenfield v. Fane*, 507 U.S. 761, 770-71 (1993)).

<sup>98</sup> *Id.* at 65.

<sup>99</sup> See Time Warner Cable Comments at 9-10.

<sup>100</sup> See *id.* at 11 & n.27 (citing *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, Order on Reconsideration, 14 FCC Rcd 7596 ¶ 16 (1998) (quoting Telecommunications Act of 1996, Joint Explanatory Statement of the Committee of Conference, S. Conf. Rep. 104-230, 104th Cong., 2d Sess., at 181 (1996))).

<sup>101</sup> See Rovi Comments at 4-6.

<sup>102</sup> See Letter from Stephen H. Kay, Executive Vice President & General Counsel, Gemstar-TV Guide, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80, MB Docket No. 00-67 (Nov. 14, 2007).

<sup>103</sup> In the tru2way MOU, the major CE manufacturers – Sony, Samsung, Panasonic, LG Electronics, Funai (known in the US under the brand names Philips, Magnavox, Sylvania, and Emerson), Digeo, ADB, and chip maker Intel; and the nation’s six largest cable providers – Comcast, Time Warner Cable, Cox, Cablevision, Charter, and

applicable to guide data. A variety of MVPDs also emphasize how the owners of copyrighted works may license content, restrict it, and even refuse to license it except upon mutually acceptable terms and how cable offerings are protected as “collective works” and “compilations,” and by state law against misappropriation.<sup>104</sup>

As Charter explains, a government-imposed disaggregation mandate would not only damage and dilute the cable operator’s name and trademarks, but would also undo the retail marketplace in which MVPDs compete with each other to improve the consumer experience. That marketplace starts when “Charter negotiates rights from programmers in individually-negotiated carriage agreements to obtain the programming it offers at retail. The content is not licensed as a free-floating asset for wholesale distribution.”<sup>105</sup> From those wholesale assets – for which device manufacturers like Sony are obviously also able to bargain – MVPDs create competitive packages.

With those negotiated rights, Charter then creates (and adjusts) programming prices and packages in order to meet or better the offerings of DirecTV, DISH, AT&T, and Verizon. Price competition alone is not enough. Customers need to have a sense of value, and retailers are constantly striving to convey that sense of value. For example, Charter might negotiate rights to exhibit particular programs

---

Bright House Networks recognized these rights and agreed that there should be no requirement for cable operators to provide services, metadata, or programming guide data in a disaggregated way. Nonetheless, cable operators agreed to help populate an alternative CE guide in tru2way devices with guide data for linear channels. The guide data is delivered via the CBS digital channel for use by CE manufacturers *who have license rights* to use such guide data from the owner of the guide data, for implementation in a guide that has independently cleared any necessary patent rights.

<sup>104</sup> CEA/CERC contend that “consumers already pay for this data in their subscriptions” and that denying them access to unbundled use of the disaggregated guide data is “price discrimination ... against competitive products.” CEA/CERC Comments at 18. This is mistaken. Guide data is integrated into a cable operator’s guide by limited license from the owner of that data. As Rovi explained, “generally speaking Rovi licenses its intellectual property (including guide data) to operators for their use on their devices, only.” Rovi Comments at 6. When the guide is provided to consumers, it is offered as a work protected by the statutory, constitutional, copyright, and other legal constraints discussed in this section. Certain representatives of local franchising authorities suggest a further regulation governing the program guide listings for public access channels. *See Nat’l Ass’n of Telecomm. Officers & Advisors Comments at 9.* PEG matters are governed by Section 611 of the Communications Act, state franchise laws, and local franchise agreements, rather than by Section 629, and are unrelated to the matters at issue in this NOI.

<sup>105</sup> Charter Comments at 3.

on the same day they are released on DVD, and associate that program with a special Charter offer. Charter might place HBO on-demand channels immediately adjacent to HBO linear, in order to present customers with an easy way to access the programming, and as a way of reinforcing their sense of value in a premium subscription by providing hundreds of hours of premium on-demand programming at no additional cost.<sup>106</sup>

An MVPD's selection, arrangement, and branding are critical parts of retail competition.

Retail branding and packaging are essential tools for the retail market. For consumers to have a continuing sense of value for their retail subscription, they need to associate the amount they pay each month with the value they receive from Charter's investment in network upgrades, Charter's expansion in service, the quality of Charter's 24/7 customer care, and the new services made available by Charter. It is the Charter brand and Charter's packaging that makes that association.<sup>107</sup>

The legal arguments from the proponents of disaggregation are, by contrast, threadbare.

Often they merely cite to each other's vague reassurances that such rules would be lawful.<sup>108</sup>

The little analysis that is offered cannot sustain their case. None offers a serious First Amendment defense. For the statutory defense, none acknowledges that the purpose of Section 629 was to enable retail devices to receive MVPD services, not to create some derivative service; and most simply say in a sentence or two that since the consensual "one-way" plug and play rules could be adopted, so too could AllVid adapter rules, ignoring the far more intrusive and extensive scope of the suggested regulations they now propose.<sup>109</sup> As to copyright law, most simply pretend that a programming guide contains no creative expression, like a telephone book – a claim that Rovi and many others have thoroughly refuted – and then extend that pretense to

---

<sup>106</sup> *Id.* at 3-4.

<sup>107</sup> *Id.* at 4.

<sup>108</sup> *See, e.g.*, CEA/CERC Comments at 18 (citing TiVo).

<sup>109</sup> *See id.* at 22-23; Sony Electronics Comments at 31-32. Since the adoption of the one-way rules, the D.C. Circuit has placed even greater limitations on the authority of the Commission. *See American Library Ass'n v. FCC*, 406 F.3d 689 (D.C. Cir 2005).

the entirety of an MVPD's service offering.<sup>110</sup> None of them even acknowledge that MVPDs are retailers, rather than wholesalers, nor seem aware that the Communications Act imposes multiple, specific limits on Commission authority that their proposals would transgress.<sup>111</sup> In short, there is no serious legal defense offered to sustain any authority to disaggregate and redefine MVPD service into free wholesale piece parts for editing, control, and integration with other services by independent device manufacturers.

One party renews a proposal in the *CableCARD FNPRM* that the Commission impose an array of new detailed pricing rules on leased navigation devices and MVPD services.<sup>112</sup> Adoption of this proposal would confuse customers and complicate ordering, installation, and inventory management. We explained these practical consequences in NCTA's reply comments in the *CableCARD FNPRM* proceeding and incorporate that response here.<sup>113</sup> We also note that these requests for more intrusive pricing regulations would overturn Congress's specific decision to replace the heavy-handed regulatory approach under the 1992 Cable Act with more flexible and market-oriented approaches under the 1996 Act.

Rate regulation required individual basic rate cases at each municipal franchising authority, with each jurisdiction evaluating set-top box costs in granular detail. In addition, tier rates for the same systems were resolved in separate complaint cases at the Commission. The original rate standards limited cable operations so completely that the economic fuel for new programming, system rebuilds, expanded channel capacity, fiber upgrades, and new technology

---

<sup>110</sup> See CEA/CERC Comments at 18-19; Public Knowledge Comments at 21.

<sup>111</sup> See, e.g., Public Knowledge Comments at 21-22, 23-24; TiVo Comments at 18-19 (simply asserting Commission authority without confronting any statutory or case law limits). Public Knowledge suggests that cable companies may "remain a significant conduit," apparently unaware that the Communications Act specifically forbids rules that treat cable service as a common carrier service. See Public Knowledge Comments at 20.

<sup>112</sup> See Free Press Comments at 7-8, 10-11.

<sup>113</sup> See NCTA FNPRM Reply Comments at 9-11.

generally seized up. Investment and innovation stalled, until the rules began to relax in 1994, Congress re-entered the arena with the 1996 Act, and pricing rules began to sunset in 1998. With that intervention, innovation was unleashed again, and consumers have reaped the benefits. Today, prices for cable programming tiers are deregulated, equipment is accounted for at an aggregate, not individual, level, and rate rules are far less intrusive generally *because* Congress intervened to save innovation from the consequences of over-regulation. Requests to return to the pre-1996 Act regulatory scheme ignore the specific choices made by Congress, and so would interfere with the very innovation that consumers have been enjoying.

## CONCLUSION

In adopting its initial navigation device rules, the Commission observed that any regulation in this area “is perilous because regulations have the potential to stifle growth, innovation, and technical developments at a time when consumer demands, business plans, and technologies remain unknown, unformed or incomplete. Our objective thus is to ensure that the goals of Section 629 are met without fixing into law the current state of technology.”<sup>114</sup> The recommended specifications offered by proponents of the AllVid adapter approach would defeat that fundamental goal, and consumers would be the losers.

The cable industry is committed to work constructively with the Commission to enable more and better video device choices for American consumers. As is evident from exciting recent breakthroughs, developing flexible solutions through inter-industry consultation, specifications, standards, and other private initiatives is a far more promising path to a more

---

<sup>114</sup> *Commercial Availability of Navigation Devices*, First Report & Order, 13 FCC Rcd 14775, ¶¶ 15-16 (1998).

vibrant retail market for video devices that meet actual consumer demand than would technology mandates such as those proposed by proponents of the AllVid adapter approach.

Respectfully submitted,

William A. Check, Ph.D  
Senior Vice President, Science & Technology

Andy Scott  
Vice President, Engineering

/s/ Neal M. Goldberg  
Neal M. Goldberg  
Stephanie L. Poday  
The National Cable  
& Telecommunications Association  
25 Massachusetts Avenue, N.W. – Suite 100  
Washington, D.C. 20001-1431

Paul Glist  
Paul Hudson  
Davis Wright Tremaine LLP  
1919 Pennsylvania Avenue N.W., Suite 800  
Washington, D.C. 20006-3401

August 12, 2010