Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Expanding Consumers' Video Navigation Choices	)	MB Docket No. 16-42
	)	
Commercial Availability of Navigation Devices	)	CS Docket No. 97-80

COMMENTS OF
THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

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April 22, 2016

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The Telecommunications Industry Association ("TIA")[1] hereby responds to the above-captioned *Notice of Proposed Rulemaking* ("*NPRM*"), seeking comment on a proposal to update the Commission's rules implementing Section 629 of the Communications Act of 1934, as amended.[2] TIA believes that the Commission's proposal is neither necessary nor productive, as it will deter investment. However, if the Commission determines it must adopt new rules, the proposal should be modified to reflect best practices regarding standards-setting processes.

I. INTRODUCTION AND SUMMARY.

The *NPRM*'s premise of a failed retail market for navigation devices is faulty.[3] The marketplace is meeting the Commission's investment, innovation, and consumer choice goals with a wide variety of devices and services, including two-way connectivity and "over-the-top"

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[1] TIA is a trade association serving hundreds of information and communications technology ("ICT") manufacturers, vendors, and supplier company members through policy advocacy, as well as the writing and maintaining of numerous open voluntary consensus industry standards and specifications, and the formulation of technical positions for presentation on behalf of the United States in certain international standards fora. Since 1924, TIA has enhanced the business environment for broadband, mobile wireless, information technology, networks, cable, satellite, and unified communications through standards development, advocacy, trade shows, business opportunities, market intelligence, and worldwide environmental regulatory analysis. Its hundreds of member companies manufacture or supply the products and services used to provide video, broadband and broadband-enabled applications. TIA commented in response the 2010 *Notice of Inquiry* ("*NOI*") on video device competition. *See* Comments of TIA, MB Docket No. 10-91 et al. (July 13, 2010) ("TIA *NOI* Comments").

[2] *Expanding Consumers' Video Navigation Choices; Commercial Availability of Navigation Devices*, Notice of Proposed Rulemaking and Memorandum Opinion and Order, 31 FCC Rcd 1544 (2016) ("*NPRM*").

[3] *Id.* at 1551 ¶ 13 ("[W]e tentatively conclude that the market for navigation devices is not competitive.").

("OTT") Internet video. Manufacturers are continuously deploying new devices and services to provide MVPD content to consumers' televisions and other devices through consumer broadband service. The Commission's proposed rules are thus unnecessary and may deter investment in the innovative technologies consumers want and the broadband fueling those technologies.

If the Commission does proceed, the agency should adopt the best practices for standards development organizations ("SDOs") that TIA has observed as a long-time SDO. In particular, the FCC should modify its proposal so that any rules include reasonable goals, sufficient time, lack of a predetermined default standard, and utilize an SDO that abides by the American National Standards Institute ("ANSI") due process safeguards. Likewise, any new Commission rules should minimize the flawed aspects of the proposal that will imperil any resulting standards-setting process. These include a condensed timeline and the suggestion of a fallback standard that may discourage collaboration.

II. TIA SUPPORTS THE GOAL OF PROMOTING CONSUMER VIDEO NAVIGATION CHOICES, WHICH WOULD BE JEOPARDIZED UNDER THE PROPOSAL.

As the trade association serving hundreds of ICT manufacturers, each focused on bringing the best and most appealing products to market, TIA supports the goal of promoting consumer video navigation choices with respect to MVPD services.[4] Rather than adopting the proposals in this proceeding, which are unnecessary and are likely to lead to years of delay, TIA urges the Commission to focus its resources on open proceedings that will speed new and innovative products to market – by, for example, improving the equipment authorization

[4] *See* 47 U.S.C. § 549(a) (charging the Commission with the responsibility to "assure the commercial availability … of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming").

process.[5] At present, the marketplace is meeting consumer demand for consumer video choices. Thus, the *NPRM*'s proposal is not just unnecessary, but runs the risk of burdening both industry and consumers with costs and complexities that may deter investment and innovation.

A. Today's Video Delivery Marketplace Offers a Diverse and Expanding Choice of Innovative, Competing Video Devices, Services, and Business Models – Absent a Regulatory Mandate.

TIA's statement in its *AllVid NOI* Comments remains true today: "TIA shares the Commission's vision of a world in which consumers reap the benefits of vigorous investment and innovation, and urges the Commission to acknowledge that consumers live in this world *right now*."[6] Recent innovations in the video delivery marketplace include the emergence of new devices that access MVPD services, including two-way services, without the need of a set-top box – thus enabling the Commission's vision of consumers accessing MVPD services "wherever they want, however they want, and whenever they want, and pay less money to do so."[7] The market is moving aggressively to anticipate consumers' needs: In meetings leading up to the present proceeding, the Downloadable Security Technology Advisory Committee ("DSTAC") heard from over 30 companies explaining security and content solutions that power both set-top and alternative ways of accessing MVPD content.[8]

The marketplace is replete with technologies consumers see and those that they do not see – but that provide the connectivity and security to enable new options for delivering MVPD

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[5] *See, e.g.*, Comments of TIA, ET Docket No. 15-170 & RM-11673 (Oct. 9, 2015) (urging the Commission to allow further e-labeling and streamline its equipment authorization rules); Petition of TIA for Clarification and/or Reconsideration, ET Docket No. 13-44 & RM-11652 (July 13, 2015) (requesting, among other things, the Commission or OET issue guidance for international labs in countries without a Mutual Recognition Agreement with the United States).

[6] TIA *NOI* Comments at 3.

[7] *NPRM*, 31 FCC Rcd at 1551 ¶ 11.

[8] Downloadable Security Technical Advisory Committee Report, 30 FCC Rcd 15293, 15295 (2015) ("DSTAC Report") (attached to *Media Bureau Seeks Comment on DSTAC Report*, Public Notice, 30 FCC Rcd 15293 (2015)).

services to consumers (collectively creating the "smart video device category"). Innovative hardware such as Samsung Smart TVs and Xbox game consoles, as well as tablets and smartphones, allow consumers to access MVPD content without needing to plug into a set-top box.[9] Contrary to the *NPRM*'s generalizations, MVPDs and manufacturers are introducing innovative set-top boxes that meet consumer demand for MVPD content while often connecting to online options as well.[10] For example, the Hopper for DISH subscribers enables a consumer to view linear television from DISH, record television while watching another show or recording, access OTT content, and access different types of content through apps.[11] Similarly, consumers can pair the Hopper with a variety of the other client devices – a Joey, Wireless Joey, or a Super Joey – to introduce more capabilities such as viewing content in rooms with coaxial connections or wirelessly.[12]

Video navigation apps and Internet browser access are further transforming this marketplace. Apps from pay-TV providers are now available alongside apps from streaming

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[9] *See, e.g.*, *id.* at 4. It is not clear from the White House blog post and the National Telecommunications and Information Administration ("NTIA") filing that the Administration has taken full account of marketplace developments including the many exciting options TIA's members are offering consumers access to MVPD content. *See* Jason Furman and Jeffrey Zients, *Thinking Outside the Cable Box: How More Competition Gets You a Better Deal*, White House Blog (Apr. 15, 2016, 6:00 AM), https://www.whitehouse.gov/blog/2016/04/15/ending-rotary-rental-phones-thinking-outside-cable-box; Letter from Lawrence E. Strickling, Assistant Secretary for Communications and Information, Department of Commerce, NTIA, to Tom Wheeler, Chairman, FCC, MB Docket No. 16-42 (Apr. 14, 2016).

[10] The *NPRM* appears to assume that its overbroad construction of Section 629 of the Communications Act, 47 U.S.C. § 549, necessarily empowers the Commission to mandate that all "navigation devices" combine access to a particular MVPD's multichannel video service with access to third-party online video content as a type of "other service" contemplated by the statute. *See NPRM*, 31 FCC Rcd at 1553 ¶ 17 (noting that one of the "expectation[s]" of the proposal is "improved over-the-top integration"); *id.* at 1559-60 ¶ 27 (citation omitted) ("MVPDs and unaffiliated vendors must be able to differentiate themselves in order to effectively compete based … features they offer users (*e.g.*, integrated search across MVPD content and over-the-top content, suggested content, integration with home entertainment systems, caller ID, and future innovations)."). Even if that were correct – which is by no means certain – nothing the language, structure, or legislative history of Section 629 supports the notion that MVPDs must cede control over the presentation of their video offerings to third-parties. Moreover, as discussed herein, MVPDs already are responding voluntarily to consumer interest in online options without losing the ability to provide an attractive, consumer-friendly look and feel for their own multichannel content.

[11] DISH, Learn About DISH, Hopper Smart DVR, www.dish.com/hopper (last visited Apr. 19, 2016).

[12] DISH, Learn About DISH, Smart DVR & Equipment, Joey Receiver, http://www.dish.com/joey (last visited Apr. 19, 2016).

services, such as DISH Anywhere and Xfinity TV Go.[13] New content distribution business models have evolved, providing content owners with assurances that their IP can be protected while monetizing its value through new distribution models. For example, Sling Media and Sling TV provide alternatives for consumers, connecting content, subscribers, hardware, and software.[14]

Fully downloadable security solutions, such as Cisco's VideoGuard Everywhere,[15] provide the technological foundation for many of the new ways MVPDs use to deliver video and protect programmers' and content creators' valuable intellectual property and investment. Similarly, Digital Transmission Content Protection technology ("DTCP") is a link protection system designed to promote interoperability with other content protection technologies.[16] The Digital Technology Licensing Administrator LLC ("DTLA") works with copyright holders to evaluate whether another output or recording protection technology provides technological and license protections that are at least as stringent as those for DTCP to assure that each link in the chain of protection is sufficiently robust against unauthorized interception, retransmission, or

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[13] DSTAC Report, 30 FCC Rcd at 15334; DISH Anywhere: Only DISH gives you the power to watch all your live and recorded TV and thousands of On Demand titles anywhere, http://www.dishanywhere.com (last visited Apr. 19, 2016); *see also* Xfinity, Xfinity Apps: Use our apps to watch TV, send texts, and schedule your own DVR, http://customer.xfinity-.com/help-and-support/xfinity-apps (last visited Apr. 19, 2016); Cox, Cox TV Apps: Watch TV Everywhere online and with network mobile apps, including the new Discovery GO app, https://www.cox.com/residential/tv/tv-apps.html (last visited Apr. 19, 2016); Press Release, Comcast Launches Xfinity TV Partner Program; Samsung First TV Partner to Join, Comcast (Apr. 20, 2016), http://corporate.comcast.com/news-information/news-feed/comcast-launches-xfinity-tv-partner-program-samsung-first-tv-partner-to-join (new program to support app-based access to video programming via multiple retail devices, based on open standards technologies)

[14] Slingbox, http://www.slingbox.com (last visited Apr. 19, 2016); Sling Television, https://www.sling.com (last visited Apr. 19, 2016).

[15] *See* Reply Comments of Cisco Systems, Inc., MB Docket 15-64, at 7-8 (Nov. 9, 2015) ("Cisco Reply Comments"); Edmond Shapiro, Cisco and/or its affiliates, *VideoGuard Everywhere; Overview of Downloadable Security Solutions*, Presentation to FCC DSTAC Working Group 3 (June 2, 2015) (filed as Submission for the Record, MB Docket 15-64 (June 8, 2015)).

[16] The Digital Technology Licensing Administrator LLC ("DTLA") is the entity founded by five companies – Intel Corporation, Hitachi Maxwell, Ltd., Panasonic Corporation, Sony Corporation, and Toshiba Corporation – that licenses the DTCP. *See* DTLA, Technology, DTCP, http://www.dtcp.com/dtcp.aspx (last visited Apr. 19, 2016); *see also* Comments of DTLA, MB Docket No. 15-64 (Oct. 8, 2015).

copying.[17] The DTLA is developing "DTCP-HE," which will provide robust content protection delivered from a service provider's cloud server to a subscriber's client device.[18] Diverse, layered, dynamic security solutions are crucial to protecting consumers' systems and creators' content.[19] A government mandate forcing the ecosystem to a lowest common denominator would impair the exciting innovation presently transforming the pay-TV marketplace.[20]

B. The NPRM's Proposal Would Deter Investment by Introducing a New Government Mandate and Diverting Resources from Developing Innovative Products Consumers Want and the More Robust Broadband Deployment the Nation Needs.

The compulsory, mandated video navigation approach contemplated by the Commission runs the risk of burdening both industry and consumers with costs and complexities that are not justified by the purported benefits. For example, returning to a standards body for fixes and updates to security systems would both delay updates and "alert competitors."[21] Picking winners

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[17] A list of approved technologies that interoperate with DTCP is available at: DTLA, Licensing, Approved, http://www.dtcp.com/approvedtechnologies.aspx (last visited Apr. 19, 2016).

[18] *See* Letter from Seth D. Greenstein, Chair, DTLA Policy Group, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 15-64, at 2-3 (Feb. 11, 2016). DTCP enables localization techniques to permit only authorized retransmissions from the home and personal network. For DTCP-HE, the "localization" features would be augmented with other techniques to assure that content is securely delivered only to authorized subscribers. *Id.* at 2.

[19] *See* Cisco Reply Comments at 12 (citation omitted) (explaining that a government choice of one "monolithic security solution would present a single point of failure or attack – a step backward from the industry's existing approaches that layer link protection with additional protections such as DRM"); Frank G. Louthan IV et al., *TMT: FCC Set Top Box Proposal Commentary: Not the BYOB Party the Commission Envisions*, at 4, Raymond James U.S. Research (Apr. 11, 2016) ("Raymond James Research") (noting that pay-TV providers "make hundreds of updates and patches per month) (*attached to* Letter from Frank Louthan et al., Raymond James TMT Research, to Tom Wheeler et al., Chairman, FCC, MB Docket No. 16-42 & CS Docket No. 97-80 (Apr. 11, 2016)).

[20] *See* Letter from Michael Romano, Senior Vice President – Policy, NTCA – The Rural Broadband Association, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 16-42 & CS Docket No. 97-80, at 2-3 (Apr. 12, 2016) (predicting that "small MVPDs will ultimately be forced to adopt and implement the same standards as larger providers, resulting in a technology mandate by default for the former").

TIA anticipates that many other commenters will discuss the limits of the Commission's statutory authority under Section 629, and so we do not belabor it here. However, the FCC has more than sufficient evidence before it now to conclude that the marketplace has delivered on Congress's original vision for the "competitive availability" of many types of video navigation devices, without the need for additional government action. A plain language construction of the statutory language does not support the proposed disaggregation of MVPD channel offerings, which Congress did not – indeed could not – contemplate in 1996.

[21] Raymond James Research at 4.

and losers in this diverse environment of rapid innovation is a job best performed by consumers, not regulators.[22] The Commission should act to preserve and promote the abundant innovation taking place today in the video delivery marketplace. This will ensure continued competition over the means by which video is viewed by consumers, achieving the Commission's and Congress's ultimate goal of maximizing consumer choice and welfare.

1. The Proposal Would Stifle Investment in Video Technologies.

As proposed, the new rules would deter investment in the technologies that are changing the way consumers view MVPD content. Concerns about the unintended consequences of unnecessary regulation in this area have been borne out over time. For example, industry poured millions of dollars into the unsuccessful CableCARD technology, which was broadly rejected by consumers.[23] As summarized in the DSTAC Report, the CableCARD rules forced MVPDs to delay the transition to better transmission technologies and, in one case, caused an MVPD "to bolt on" a redundant and slow entitlement system.[24] The instant proposal would cost millions more, likely resulting in "less innovation and consumer choice."[25] As new entrants look for investment dollars, the Commission is on the verge of "stymieing the very competitors and their ability to innovate financing options for their solutions in the future" by fixating on a technology that is just one of many options for accessing MVPD content.[26] Consumer demand, not

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[22] *See* Mike Paxton, *The FCC Targets the Set-Top Box*, S&P Global Market Intelligence (Apr. 12, 2016) ("If adopted, the proposal could have a significant impact on the pay-TV industry, effectively creating groups of winners and losers."), https://www.spcapitaliq.com/insights/the-fcc-targets-the-set-top-box; *see id.* (estimating that the proposal would have a "negative" impact on MVPDs and a "moderately negative" impact on Set-Top Box vendors).

[23] *NPRM*, 31 FCC Rcd at 1548 ¶ 7 (citation omitted) (observing that "the nine largest incumbent cable operators have deployed only 618,000 CableCARDs for use in consumer-owned devices" even though millions of CableCARD-ready devices are in consumer homes).

[24] DSTAC Report, 30 FCC Rcd at 15340.

[25] Raymond James Research at 1.

[26] *Id*. at 4.

regulatory mandates, should drive investment – investment which will create the most innovative and consumer-friendly video options, as demonstrated by the current ecosystem.

2. The Proposed Regulations Would Deter Broadband Investment.

The *NPRM*'s proposed set-top-box rules also threatens continued investment in fiber-to-the-home ("FTTH") connections, in defiance of the Commission's congressional mandate to promote the deployment of current- and next-generation broadband technologies.[27] The economics of FTTH are highly sensitive to upfront deployment costs, video revenues, and video penetration.[28] These inputs determine the net present value ("NPV") of investing in any FTTH deployment – that is, the difference between the present value of cash inflows and the present value of cash outflows. As a business matter, only investments with positive NPV values are funded. As demonstrated below, the *NPRM*'s proposal would undermine the profitability of FTTH investment by, among other things, (1) adding compliance costs, (2) reducing advertising revenues, and (3) reducing set-top box rental revenues. The proposed rule could convert certain FTTH deployment projects from NPV positive to NPV negative – meaning, in plain English, that certain infrastructure build-outs or upgrades will not happen.

If FTTH deployment were ubiquitous, or if cumulative FTTH investment reached some steady state, then perhaps a regulatory shock such as the proposed rule could be tolerated in exchange for some other public policy goal. But neither condition is satisfied. As of September 2015, FTTH passed slightly less than one in five U.S. homes.[29] Tens of billions of dollars must still be invested by broadband information service providers to achieve even a reasonable level

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[27] *See, e.g.*, 47 U.S.C. § 706.

[28] UBS, FTTP Economics.

[29] RVA LLC, *North American FTTH And Advanced Broadband Review And Forecast To 2019*, at 5 (Sept. 2015) ("RVA Study").

of deployment. RVA estimates that more than $30 billion of additional investment in FTTH from 2016 to 2019 is necessary to achieve even a relative modest level of penetration.[30]

The Commission's proposal would impose new compliance costs on all video providers, including FTTH-based providers. The best indicator of the likely cost per box is the compliance cost of the FCC's prior CableCARD rule. Cable operators incurred roughly $935 million in compliance costs as of November 2009 to comply with FCC's integration ban, based on the Media Bureau's own estimate of $56 in added cost to the box from the CableCARD rules multiplied across 16.7 million CableCARD-enabled devices.[31] Given the upfront cost to pass (but not connect) a household with FTTH of roughly $700,[32] the $56 incremental cost of compliance with the proposed rule would raise the cost for homes passed by FTTH by 8 percent.

Compliance costs associated with the Commission's proposal are not limited to the direct economics associated with the devices. After implementation, it is likely that local advertising revenues for all video providers, including FTTH-based providers, would fall, draining an important source of revenue that is separate and distinct from subscriber fees. Spot cable ads sold by cable operators and other video providers allow local businesses to show their television ads on national cable networks without having to buy airtime from those networks.[33] (This is a distinct and separate inventory from the local ads sold by national cable networks.) The prices are based time of day, the program on which the ad airs, size of the audience, and length of the ad. Implicit in price is the cable operator's control over channel placement and other delivery

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[30] This modest level of penetration 40 percent of American households and serve only 20 percent of the population. *Id*.

[31] Letter from Neal M. Goldberg, Vice President and General Counsel, National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, FCC, GN Docket 09-51 & CS Docket 97-80, at n.1 (Nov. 18, 2009).

[32] CSMG, *FTTH Deployment Assessment*, at 4 (Oct. 13, 2009).

[33] *See, e.g.*, Deb Powers, *What is Spot Cable*, AzCentral, The Arizona Republic, http://yourbusiness.azcentral.com-/spot-cable-14083.html (last visited Apr. 19, 2016).

options, which could no longer be guaranteed under the proposed rules.[34] In addition, the proposal appears likely to result in the potential losses in net viewing and data collection, thereby weakening a video provider's ability to differentiate its adverting inventory. Should the Commission question the importance of advertising to MVPDs, according to SNL Kagan and Statista, local cable advertising revenue was approximately $5 billion in 2015, or $4.13 per home per month.[35]

The proposal would also reduce the profitability of video service, which is necessary for any FTTH operator to compete effectively. The margins from video service are small generally, but are especially tight for smaller video entrants, which typically pay premiums (relative to large cable operators) for the rights to video programming.[36] FTTH operators generate video revenues through a combination of video subscription fees, local spot advertising, and set-top box fees. If the proposed rule works the way the Commission intends by driving customers away from operator-provided boxes, all MVPDs necessarily would lose some portion of their set-top box revenues.[37] Indeed, the loss in set-top box revenue from subscribers defecting to other set-top devices could have a substantial impact on telcos.[38] These revenues are an

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[34] *See, e.g.*, *NPRM*, 31 FCC Rcd at 1553 ¶ 17.

[35] *See, e.g.*, Statista, Local cable television advertising revenue in the United States from 2010 to 2019 (in billion U.S. dollars), http://www.statista.com/statistics/411648/local-cable-tv-advertising-revenue-us. $4.13 is equivalent to 5 billion divided by 100.9 million MVPD households divided by 12 months. Because the television advertising business is built on guaranteed placement in programs and narrow time windows on specific networks, as well as guaranteed impressions on delivery of audience levels in these purchased ad placements, the inability to offer such guarantees could significantly diminish the value of those ads. Losing specificity of placement and resorting to Run of Schedule ("ROS") selling would reduce the demand for cable ad inventory, leading to lower unit rates on what could be sold, as ROS rates tend to be far lower than fixed position rates.

[36] *See* Comments of American Cable Association, MB Docket No. 15-158, at 4 (Aug. 21, 2015) (if current trends for content costs and revenues continue, "video margins for smaller-scale MVPDs will turn negative" by 2020).

[37] After all, one of the primary drivers of the *NPRM* is not that whether there are options for accessing MVPD content – there clearly are, as explained in Section II.A – but that consumers primarily access the content through MVPD-leased devices and MVPD-apps. Therefore, success under the rules must be a shift in actual consumer use of the plethora of options available away from their pay-TV provider.

[38] *See, e.g.*, Letter from Craig L. Silliman, Senior Vice President – Public Policy, Verizon, to Edward J. Markey & Richard Blumenthal, Senators, U.S. Senate (Dec.11, 2014) (Verizon charges $11.99 per month for the first set-top

important component of the video product revenue stream for smaller MVPDs that already operate that service at a tight, and ever-shrinking, profit margin. Under the proposed rules, competitive video entrants would face an untenable choice. On the one hand, telcos could forgo this revenue and thus what little margin smaller MVPDs still have, further undermining justification for future investment in competitive video services. On the other hand, they could attempt to offset this revenue loss by increasing video subscription prices to consumers that must also pay another provider for set-top equipment and services and thus making their video offering a less compelling option for their customers and eventually decreasing the service's penetration.

It is difficult to know how many planned FTTH projects would be converted from NPV positive to NPV negative as a result of the FCC's proposed rules. According to a UBS FTTH investment model, any *one* of the following modest changes – a $100 decrease in the upfront cost per home passed, a five-percentage point increase in video penetration, or a $7.50 increase in monthly video revenue per household – converts a planned FTTH deployment from NPV negative to NPV positive.[39] TIA estimates that a typical FTTH operator will incur (i) a one-time added compliance cost of $56 as the operator retrofits systems to interface with third-party set-top boxes; (ii) an ongoing, per household reduction in ad revenues of $1.03-$2.07 due to lose in local cable ads; and (iii) an ongoing, per household reduction of $2.50-$4.50 as some customers opt for a set-top box from third-parties. While none of the impacts TIA predicts individually rises to the levels indicated in the UBS model, the *combined* impact likely presents a sufficiently large degradation to the business case that certain FTTH projects will no longer be profitable to

box, plus $22.99 for basic DVR service), http://www.markey.senate.gov/imo/media/doc/Response%20--%20VZ%20%2012-12-14.pdf.

[39] *See supra* n.28.

deploy. And this change in regulatory policy would add to the depressive impact of the Commission's recent Open Internet rulemaking decision. According to a recent study, by increasing compliance costs and decreasing revenues from paid priority, the Title II reclassification of broadband is expected to reduce FTTH deployments by between 7 to 17 million homes over the next decade.[40] Although the FCC's proposed rules are different, the new rule similarly increases compliance costs and decrease revenues (albeit from different sources). Accordingly, the proposed rules could impair FTTH deployment to a similarly noteworthy magnitude.

III. TO THE EXTENT THE COMMISSION PURSUES NEW RULES, THE REGULATIONS SHOULD REQUIRE CONSENSUS-BASED STANDARDS THAT CONFORM TO SDO BEST PRACTICES.

Drawing upon TIA's long legacy as an SDO, our association has deep concerns about the standards process in this proceeding.[41] The *NPRM* calls for MVPDs "to provide the Information Flows in published, transparent formats that conform to specifications set by 'Open Standards Bodies,'" as defined by the Commission.[42] TIA is a firm supporter of the incorporation of voluntary consensus standards in Commission rules,[43] but the process sketched out in the *NPRM* will fall short of the *NPRM*'s goals of "arm[ing] the Commission with an established test to judge whether an MVPD's method of delivering the three Information Flows is sufficient … to

[40] RVA Study at 89.

[41] *See NPRM*, 31 FCC Rcd at 1564-65 ¶¶ 41-43 (defining "Open Standards Body" and asking, among other questions, whether the Commission should "adopt a 'fallback' or 'safe harbor' set of specifications" based on those proposed by "Competitive Navigation advocates").

[42] *Id.* at 1564 ¶ 41; *see also id.* at 1561 ¶ 36 (citations omitted) (emphasis added) ("Under our proposed rule, we would require each MVPD to provide Service Discovery Data, Entitlement Data, and Content Delivery Data for its 'Navigable Services' in *published, transparent formats that conform to specifications set by open standards bodies*.").

[43] *See, e.g.*, Comments of TIA, CG Docket No. 13-46 et al., at 4-9 (Feb. 26, 2016) (urging the Commission to amend its wireline hearing aid compatibility rules to reference the updated TIA-4965 standard).

assure a retail market."[44] Although TIA believes that no new rules are needed to serve the goals of Section 629, if the Commission does move forward, the agency should adopt best practices, increasing the likelihood of creating reliable standards.

A. Adopting Specific Best Practices Leads to Better Standard-Setting Processes and Outcomes.

TIA is accredited by ANSI[45] to develop voluntary industry standards for a wide variety of telecommunications products and sponsors more than 70 standards-formulating committees.[46] These groups create open, consensus-based voluntary standards for numerous facets of the ICT industry that are used by private sector interests and government alike.[47] TIA's process also creates opportunities for further competition among differentiated implementations and products using the same base standard, which provides the opportunity to spur more innovation and choice for customers and users.

In TIA's experience, the ANSI safeguards – such as (1) outside accreditation of a SDO's procedures, (2) a right for all interested parties to participate, (3) a requirement to conduct outreach to achieve balance (without unnecessary delay), (4) sufficient notice of meetings, (5) milestones, and (6) concrete and procedurally predictable processes for appeals and resolving

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[44] *NPRM*, 31 FCC Rcd at 1564 ¶ 41.

[45] *See* ANSI, Standards Activities, Domestic Programs (American National Standards) Overview ("Accreditation by ANSI signifies that the procedures used by the standards body in connection with the development of American National Standards meet the Institute's essential requirements for openness, balance, consensus and due process."), https://www.ansi.org/standards_activities/domestic_programs/overview.aspx?menuid=3 (last visited Apr. 19, 2016); *see also* ANSI, *ANSI Essential Requirements: Due Process Requirements for American National Standards* (Jan. 2016 ed.), http://www.ansi.org/essentialrequirements.

[46] These committees are made up of over 1,000 volunteer participants, including representatives from manufacturers of telecommunications equipment, service providers and end-users, as well as local, state, and federal government entities. The member companies and other stakeholders participating in the efforts of these committees and sub-groups have produced more than 3,000 standards and technical papers that are used by companies, consultants, and governments to produce interoperable products around the world. *See* TIA, Standards, Technology & Standards, http://www.tiaonline.org/standards/ (last visited Apr. 19, 2016); TIA, Standards FAQ, Standards Frequently Asked Questions, http://www.tiaonline.org/standards/standards-faq (last visited Apr. 19, 2016).

[47] *See, e.g.*, 47 C.F.R. § 90.548(a)(2) (requiring certain radio transmitters designed for data transmission to include a mode of operation conforming to ANSI/TIA-102.BAEA-B-2012, ANSI/TIA-102.BAAA-A-2003, ANSI/TIA-102.BAEB-A-2005, and ANSI/TIA-102.BAEE-B-2010).

comments on standards – are fundamental to developing credible standards. Moreover, other best practices include establishing reasonable goals, allowing sufficient time, and not starting with a predetermined default standard. In particular, establishing a default or fallback specification tied to a short timeline provides an incentive for proponents of the fallback to run out the clock.

B. Adopting Best Practices is Critical in This Proceeding Because of the Heterogeneity of the Smart Video Device Marketplace.

Given the breadth of the "smart video device" category, the ICT manufacturers that would need to come to terms over the standards implicated by this proceeding would include makers of set-top boxes, game systems, DVRs, home theaters, and desktop and mobile computers along with TV receiver manufacturers. In addition, the standards process would need to include developers of software applications, including developers associated with specific devices and independent developers. Content owners and video distributors vary both in terms of the technical specifications they prefer to differentiate their offerings from competitors and in terms of their desired intellectual property protection. The experience of the DSTAC underscores the challenges associated with the FCC's proposed standards-setting approach and the need to adopt best practices.[48]

In light of the challenges the smart video category presents, by failing to follow standards-setting process best practices, the Commission risks further undermining the prospects of reaching a consensus. In particular, the Commission should not adopt a fallback set of technical specifications for the Information Flows that MVPDs must utilize should the standards process fail to produce a consensus. Anointing technologies, including a default solution, well in

[48] In particular, members of the DSTAC determined that they could not reach consensus within the tight timeframe set by the statute and so offered alternative proposals in their report.

advance of the completion of the standards process would place the Commission in the position of attempting to predict which technologies would most likely prevail in the marketplace. Such a backwards approach will hamstring innovation and increase consumer costs.

Further, any rule implementation timeline must reflect sufficient time for both a fair and inclusive deliberative process, on the one hand, and work by industry to implement any resulting standards into products and services, on the other. Combined these processes will take more than the two years proposed in the *NPRM* – indeed, a time period of at least three years is more realistic. The *NPRM* suggests that the FCC would limit participation to five groups of stakeholders. In TIA's experience, the ANSI approach of allowing all stakeholders to be part of standards development is better because it does not inadvertently risk excluding an interested party should an unnamed party later realize it will be positively or negatively affected.[49]

Simply specifying that an SDO's procedures, including an appeals process, must be "published," without requiring external vetting before implementation, is insufficient.[50] Outside vetting of such procedures enables buy-in and good faith in the process, increasing the chances of a successful outcome.

IV. CONCLUSION.

Consumers, not regulators, are in the best position to signal to industry the technologies that best meet their needs. The Commission should act to preserve and promote the abundant innovation in the video delivery marketplace today. The agency also should consciously avoid actions that would depress investment in either new video devices and apps or in the broadband infrastructure needed to support high-quality video delivery. This approach will ensure

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[49] *NPRM*, 31 FCC Rcd at 1564 ¶ 41 ("We seek comment on our proposed definition of Open Standards Body: A standards body (1) whose membership is open to consumer electronics, multichannel video programming distributors, content companies, application developers, and consumer interest organizations….").

[50] *Id.*

continued competition among the means by which video is selected and viewed by consumers, thus serving Congress's ultimate goal of maximizing consumer choice and welfare.

Respectfully submitted,

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April 22, 2016