

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

In the Matter of)
)
Media Bureau Seeks Comment On Joint Petition) GN Docket No. 16-142
for Rulemaking Of America’s Public Television)
Stations, The Awarn Alliance, The Consumer)
Technology Association, and The National)
Association of Broadcasters Seeking to)
Authorize Permissive Use of the “Next)
Generation TV” Broadcast Television Standard)

**COMMENTS OF PUBLIC KNOWLEDGE, COMMON CAUSE, AND OPEN
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COMMENTS OF PUBLIC KNOWLEDGE

I. INTRODUCTION AND EXECUTIVE SUMMARY

Public Knowledge supports the introduction of innovative new technologies to the public. Next-generation television using the ATSC 3.0 standard promises a wealth of new consumer-friendly features, including sharper pictures, better mobile viewing, improved emergency alerts, new opportunities for community engagement and novel interactivity with over-the-air television viewers. But these innovations must not upend broadcasters’ statutory obligation to serve the public interest.¹ Local television broadcasters are a critical source of local news, serve the educational and information needs of children and offer an invaluable lifeline in times of crisis and natural disasters. Local broadcasters also play an important role in reaching diverse audiences and providing inclusive, freely accessible programming. And local broadcasters help advance the democratic process through a series of regulatory obligations on political advertising such as reasonable access to television by candidates, lowest unit rate charges in the time preceding many types of electoral contests, and equal opportunities for competing candidates.

¹ See, e.g., 47 U.S.C. §§ 307(a), 309(a), 310(d).

² *Public Interest Obligations of TV Broadcast Licensees*, Notice of Inquiry, 14 FCC Rcd 21633, ¶ 8 (1999) (“Notice

Authorizing the use of a new technical standard may limit or preclude broadcasters from satisfying these and other public interest obligations. Prior to authorizing the deployment of ATSC 3.0, the FCC must examine how broadcasters will fulfill the public interest obligations on which their licenses depend. The development of ATSC 3.0 also offers the FCC an opportunity to renew and enhance broadcasters' public interest mission that the Communications Act requires as a condition of broadcast licensing.

II. BACKGROUND

In 1999, long before the universal conversion of broadcast television from an analog to digital transmission standard, the FCC initiated a comprehensive inquiry that asked broadcasters and members of the public “to present their views or ideas on how best to implement the public interest standard during the transition.”² The public interest standard, the FCC noted, is “a supple instrument” designed to be flexible enough to accommodate the “dynamic aspects of radio transmission.”³ Therefore, the advent of the digital transition made for an “appropriate” time to “seek comment on how to define these [public interest] obligations,” including “how existing public interest obligations should translate to the digital medium.”⁴

In response, public interest organizations recommended a variety of measures to update broadcasters' public interest obligations for the digital era, including: (1) quantitative minimum public interest requirements; (2) extending those public interest obligations to newly available capacity; (3) applying public interest obligations to ancillary program services; (4) offering local institutions, such as schools, libraries, and non-profit operations, access to ancillary services; and (5) protecting consumers' privacy with an opt-in requirement before allowing broadcasters to

² *Public Interest Obligations of TV Broadcast Licensees*, Notice of Inquiry, 14 FCC Rcd 21633, ¶ 8 (1999) (“Notice of Inquiry”).

³ *Id.*

⁴ *Id.* ¶ 11.

monitor consumers' television use and consumption patterns.⁵ By contrast, the National Association of Broadcasters and other advocates for the broadcast industry opposed any serious examination of broadcasters' public interest obligations on grounds that "nothing inherent in digital technology requires a different . . . public interest analysis than that currently applied to analog television broadcasters."⁶ After more than eight years of deliberation, the Commission under then-Chairman Kevin Martin said it had resolved several of the issues raised in the 1999 proceeding through the adoption of a new children's television programming requirement and the use of a standardized quarterly reporting requirement form.⁷ If circumstances changed, however, the FCC promised to revisit the public interest obligations of broadcast licensees and "initiate proceedings as appropriate."⁸ Today, with the passage of another eight years and on the eve of the "transformative new viewing experiences" made possible through ATSC 3.0, the time to reexamine broadcasters' public interest obligations has come.⁹

III. FREE OVER-THE-AIR BROADCASTING CONTINUES TO OFFER CRITICAL PUBLIC INTEREST BENEFITS

Free, over-the-air television offers important benefits for the public. Broadcasters received licenses to use the spectrum in exchange for public service.¹⁰ More than eighty years ago, Congress required broadcasters to serve the "public interest, convenience, and necessity" and "charged the [FCC] with the responsibility of implementing and enforcing this public

⁵ See, e.g., Comments of the Office of Communication, Inc. of the United Church of Christ et al., MM Docket No. 99-360, at ii-iii (Mar. 27, 2000) ("UCC, et al. Comments").

⁶ Comments of the National Association of Broadcasters, MM Docket No. 99-360, at v (Mar. 27, 2000).

⁷ 2006 *Quadrennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996*, Report and Order and Order on Reconsideration, 23 FCC Rcd 2010 ¶ 145 (2008).

⁸ *Id.*

⁹ See National Association of Broadcasters, et al., Petition for Rulemaking, GN Docket No. 16-142 (Apr. 13, 2016).

¹⁰ 47 U.S.C. § 336(d).

interest requirement.”¹¹ Since then, the FCC has repeatedly found that broadcasters “have a special role in serving the public” and has held that upholding the broadcast public interest obligation represents the “touchstone” of the FCC’s statutory responsibility over the public airwaves.¹² Even in the Internet age, television remains a “primary source of news and information to Americans and provides hours of entertainment every week,” especially for children.¹³ Moreover, as cable television costs continue to increase, consumers have begun to examine broadcast television as an alternative for securing affordable access to video programming.¹⁴

ATSC 3.0 promises to allow broadcasters to reap immense new financial rewards through a variety of new business and marketing practices, including (1) highly targeted advertising that tailors ads to the viewer’s gender, age, marital status, and more; (2) engagement advertising that allows consumers, including children, to connect directly with the advertiser for purchases of goods and services; (3) new monitoring tools to assess advertising performance and responder demographics to allow for further refinements of marketing practices; and (4) the development of novel offerings, including virtual gifts and currencies to allow viewers to connect with others in their community with the broadcasters collecting a portion of the proceeds. ATSC 3.0, in other words, represents just the type of radical shift in broadcast technology that warrants a comprehensive examination of how broadcasters will satisfy their public interest obligations in this new environment.

¹¹ 47 U.S.C. §§ 307(b), 309, 336(d); Notice of Inquiry ¶ 1.

¹² Notice of Inquiry ¶ 1.

¹³ *Id.* See Lydia Saad, *TV is Americans’ Main Source of News*, GALLUP (Jul. 8, 2013), <http://www.gallup.com/poll/163412/americans-main-source-news.aspx>.

¹⁴ Free, over-the-air television can enable cord cutting when combined with over-the-top offerings available through a subscription broadband service.

With the historic shift of television from a one-way medium of passive interception by consumers to a medium for collecting information from viewers without any clearly applicable rules to ensure rigorous privacy protection, there are far more questions than answers for the public at large. For example, when can a broadcaster discontinue ATSC 1.0 services in favor of ATSC 3.0 services? Does a broadcaster satisfy its public interest obligations by offering HD content free to the public, but charging a fee to view simulcast UHD content? What if the broadcaster does not charge a fee for UHD content, but instead requires the viewer to create an on-line profile to allow for user tracking and improved targeted advertising? Is any type of *quid pro quo* of greater service in exchange for improved end-user visibility consistent with the broadcaster's public interest obligation?

More generally, what if a viewer lacks access to an Internet connection? Does the broadcaster have an obligation to offer universal UHD content over its stream without registration? What types of security features would apply to the registration process and what rules would govern the disclosure of this information to third parties? Would it be beneficial to require broadcasters adopting ATSC 3.0 to create individual user profiles for every member of the household so that children's programming is directed at children? What type of safeguards would exist in such environment to ensure that the adults registered as viewers are actually adults and not children? How should broadcasters protect children's privacy rights and comply with existing child privacy laws, such as the Children's Online Privacy Protection Act?¹⁵

With so many public policy benefits at stake, the public should not have to wait to see whether broadcasters will continue to provide free, over-the-air television to their communities of license and surrounding areas following the adoption and use of ATSC 3.0. The public has a

¹⁵ Children's Online Privacy Protection Act of 1998, 15 U.S.C. §§ 6501-6505 ("COPPA").

strong interest in “ensuring a diversity of sources of information about important local issues, maintaining an informed electorate, meeting the educational and information needs of children and making sure that digital television is accessible to all.”¹⁶ Based on the public interest community’s experience with the broadcast industry during the DTV transition, moreover, a strong public policy interest exists in ensuring that broadcasters – not consumers – bear the cost of converting from the present-day transmission standards and business practices to the new ATSC 3.0 standard and the business practices that the new standard will enable.

Failing to examine the broadcasters’ public interest obligations sooner rather than later may well lead to the development of technology or business practices that preclude or constrain broadcasters’ obligations to the public in the future. The FCC must act quickly to prevent all of the benefits of the ATSC 3.0 transition from flowing to the broadcasters while all of the burdens – in terms of the cost of purchasing new equipment, the loss of privacy, and the lack of any type of mechanism to translate present-day public interest obligations onto new and ancillary services – fall on consumers.

To be clear, broadcasters may have any number of straightforward solutions to continue to promote the public interest. Channel sharing, for example, may permit continuous carriage of the older signal with the new ATSC 3.0 for a long period of time. Next-generation services, such as user registration and fee-for-service concepts, may enhance the viewing experience and improve programming content and viewer engagement. Public Knowledge does not oppose the transition to innovative new platforms that promise an improved viewing experience for consumers. Nor does Public Knowledge have any preconceived views on whether or how long the broadcasters should maintain their ATSC 1.0 transmissions into the future. The point is not to

¹⁶ UCC, *et al.* Comments at i.

answer all the questions that the transition to ATSC 3.0 raises, but rather to understand the scope of the change that ATSC 3.0 portends for broadcasters and consumers. The FCC must embark on a process now to identify a path for protecting the public interest during the transition to ATSC 3.0 and in the years that follow.

IV. BROADCASTERS MUST CONTINUE TO MEET THEIR PUBLIC INTEREST OBLIGATIONS REGARDLESS OF CHANGES TO THE TECHNOLOGY USED TO DELIVER BROADCAST SIGNALS

When the FCC implemented the digital TV transition, it required that broadcasters air “free digital video programming service the resolution of which is comparable to or better than that of today's services, and aired during the same time period that their analog channel is broadcasting.”¹⁷ The Commission explained that “broadcast licensees and the public are on notice that existing public interest requirements continue to apply to all broadcast licensees.”¹⁸ The Commission further recognized that “broadcasters must air programming responsive to their communities of license, comply with the statutory requirements concerning political advertising and candidate access, and provide children's educational and informational programming, among other things.”

The same is true today: the ATSC 3.0 transition does not fundamentally alter broadcasters’ public interest obligations. If consumers choose mobile devices, instead of TV sets, to receive over-the-air content, that choice does not relieve broadcasters of their public interest obligations any more than the offering of new supplemental or ancillary services should allow broadcasters to avoid responsibility for promoting the public interest with these additional

¹⁷ *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, Fifth Report and Order, 12 FCC Rcd 12809, 12820 (1997).

¹⁸ *Id.* at 12830.

offerings over the spectrum that they have received without payment to the United States Treasury.

1. Political Rules

The FCC's political rules for broadcast stations provide certain candidates for political office equal time or opportunities to reach voters through the public airwaves. With some exceptions, such as candidates appearing on regularly scheduled news or news interview programs, broadcast television stations must provide legally qualified candidates for Federal, State or Local office with equal time if their opponents are permitted to use the station's airtime.¹⁹ Likewise, if a candidate pays for time, the broadcast TV stations must offer other candidates equal opportunity to pay for time.²⁰ Stations may not discriminate between candidates in making time available to candidates for public office.²¹ Additionally, broadcast stations must sell advertising time at the lowest unit rates for all candidates for local, state, and federal office.²²

Broadcasters must also maintain and make available to the public a political file of "all requests for broadcast time made by or on behalf of a candidate for public office, together with an appropriate notation showing the disposition made by the licensee of such requests, and the charges made, if any, if the request is granted. The 'disposition' includes the schedule of time purchased, when spots actually aired, the rates charged, and the classes of time purchased."²³ The FCC's political broadcast rules continue to serve the public interest by ensuring fair use of the public spectrum by candidates for political office, while enabling those candidates to deliver their message in a cost effective manner on a non-discriminatory basis.

¹⁹ 47 C.F.R. § 73.1941.

²⁰ *Id.*

²¹ *Id.*

²² 47 C.F.R. § 73.1942.

²³ 47 C.F.R. § 73.1943.

Now that ATSC 3.0 will enable broadcasters to more readily offer additional streams of programming, should the Commission now require broadcasters to provide additional airtime to political candidates? What if the supplemental services are ultra-high definition? Should broadcasters be required to offer UHD programming in addition to HD? How should broadcasters apply the equal time and equal opportunity rules as ATSC 3.0 opens new avenues for broadcasters to distribute programming? What obligations would broadcasters have to provide viewer-engagement data to candidates seeking public office? If viewer engagement data is provided to one candidate but not the other, has a violation of the “equal opportunity” rules occurred? How should the Commission define the lowest unit rates in terms of multicast streams and hybrid broadcast-over-the-top offerings?

As this year’s election process has shown, broadcasting continues to play a crucial role in the political process. The Commission should reiterate that all political rules currently in place must continue to apply, regardless of the broadcast standard or technology utilized. These requirements include, but are not limited to, the reasonable access provisions of Section 312(a)(7),²⁴ disclosure requirements from the Bipartisan Campaign Reform Act of 2002 (BCRA) codified in Section 315,²⁵ and the disclosure of sponsor identity rules under Section 317.²⁶

2. Localism

While the FCC does not maintain an explicit rule that requires broadcast stations to produce local programming, broadcast stations are a distinctly local media. Congress endorsed the concept of localism in Title III of the Communications Act, which requires the FCC to “make such distribution of licenses, frequencies, hours of operation, and or power among the several

²⁴ 47 U.S.C. § 312(a)(7).

²⁵ 47 U.S.C. § 315.

²⁶ 47 U.S.C. § 317.

States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.”²⁷ When the FCC awards licenses to provide broadcast service, it does so using local licenses relating “to the principal community or other political subdivision which it primarily serves.”²⁸ The FCC requires broadcasters to provide service within certain technical parameters to ensure that members of the local community can receive a station’s signal.²⁹ Full-power broadcast TV stations must maintain their main studio in or near their community of license and make all calls from people in the community to the station toll-free.³⁰ Broadcast television news is a critical source of local information for the American public. Nearly eight of ten Americans get their news from a local television station.³¹ The Pew Research Journalism Project found that almost three-fourths (71%) of U.S. adults view local TV news over the course of a month.³² Thus local broadcasting remains critically vested with the public interest. Local TV remains the primary source (49%) of news about politics and government across the ideological spectrum.³³ Local television news broadcasts attract large audiences because citizens want to know about news that directly affects them and their communities.

The ATSC 3.0 transition raises additional questions regarding the FCC’s continued dedication to localism. For example, how will the FCC continue to promote localism as

²⁷ 47 U.S.C. § 307(b).

²⁸ 47 C.F.R. § 73.1120.

²⁹ 47 C.F.R. § 73.1125(a)(1), (e).

³⁰ 47 C.F.R. § 73.1125.

³¹ Waldman, S., *The information needs of communities: The changing media landscape in a broadcast age*, Federal Communications Commission (2011) available at https://transition.fcc.gov/osp/inc-report/The_Information_Needs_of_Communities.pdf.

³² Olmstead, K., Jurkowitz, M, Mitchell, A. & Enda, J., *How Americans get their news at home* (2013), available at <http://www.journalism.org/2013/10/11/how-americans-get-tv-news-at-home/>.

³³ Mitchell, Amy, Jeffrey Gottfried, Jocelyn Kiley, and Katerina Eva Matsa, *Section 1: Media Sources: Distinct Favorites Emerge on the Left and Right*, Pew Research Center’s Journalism Project (October 21, 2014), available at <http://www.journalism.org/2014/10/21/section-1-media-sources-distinct-favorites-emerge-on-the-left-and-right/>.

broadcasters take advantage of new multi-casting opportunities and transition to the new standard? Should the FCC adopt localism requirements similar to existing educational and children's programming requirements? Will hybrid broadcast-over-the-top offerings degrade localism by moving the broadcast industry further towards national content? Would offering local content only behind a pay-for-service firewall satisfy broadcasters' public interest obligations? How would video-on-demand programming affect broadcasters' commitment to localism? Would a broadcaster discharge its focus on local programming simply by maintaining "evergreen" information about local tourist attractions as available for viewers to download on request? Or does localism require more current, news-and-events-focused programming available on the primary programming stream?

3. Educational and Children's Programming

Broadcasters must meet educational and informational programming obligations and ATSC 3.0 allows for an important opportunity to expand broadcasters' commitment to educational and children's programming. In 1990, Congress adopted the Children's Television Act ("CTA") to increase the amount to educational and informational programming for children on TV.³⁴ The CTA required the FCC to prescribe standards for commercial television broadcast licensees that limit the duration of advertising in programs for children to a specific number of minutes per hour and to consider a licensee's programming in connection with the educational and information needs of children as part of a license renewal proceeding.³⁵

To implement the CTA, the FCC required broadcast television stations to (1) air at least three hours per week of core programs; (2) identify core programs by displaying the symbol E/I throughout the program; and (3) provide parents and consumers with advance information about

³⁴ See *Children's Television Act of 1990*, 104 Stat. 996, 47 U.S.C. § 303a.

³⁵ *Id.*

core programs and when they are being aired.³⁶ The Commission adapted the educational programming requirement for the digital transition by requiring broadcasters that multicast to increase their educational and informational programming proportionally to the hours of programming they offer through secondary streams.³⁷ Broadcasters that offer more than one stream of free digital video programming must provide one-half hour per week of additional core programming for every increment of one to 28 hours of free video programming provided in addition to their main program stream.³⁸

The FCC should affirm that broadcasters must meet their educational and informational programming responsibilities even as they deliver programming streams through new platforms. The Commission should also explore how broadcasters can offer additional educational and information programming through multicast programming streams and hybrid broadcast-over-the-top services. Should the FCC require broadcasters to offer more of its existing children's programming on various streams? How would video-on-demand offerings affect children's programming requirements? Are those requirements satisfied by making video available for download, or are new programs required to be aired over the primary stream? Should the Commission require broadcasters to develop a certain percentage of content and programming to be delivered via broadband that complements existing educational programming? What other changes to children's programming might ATSC 3.0 allow?

³⁶ 47 C.F.R. § 73.671. Core programming is defined as programming that (1) serves the educational and informational needs of children ages 16 and under as a significant purpose; (2) airs between the hours of 7:00 a.m. and 10:00 p.m.; and (3) is regularly scheduled weekly program; and (4) runs at least 30 minutes in length.

³⁷ *Children's Television Obligations of Digital Television Broadcasters*, Report and Order and Further Notice of Proposed Rule Making, 19 FCC Rcd 22943, 22944 (2004).

³⁸ 47 C.F.R. § 73.671(e)(2)(i). This additional programming can either be spread across the additional streams of video programming or placed on one of the additional video streams. 47 C.F.R. § 73.671(e)(2)(ii).

4. Accessibility

The ATSC 3.0 transition does not alter broadcasters' responsibilities to deliver closed captioning and video description information to the public.³⁹ The ATSC accessibility group has touted the ability of ATSC 3.0 to enhance closed-captioning and video description.⁴⁰ These are admirable goals and the FCC should encourage such efforts. But the FCC must decide how it will determine whether these advanced features will sufficiently enhance accessibility of broadcast programming for persons with disabilities, especially for novel service offerings. Will the new ATSC 3.0-enabled service offerings incorporate user-centered design principles into equipment and services and will ATSC 3.0 services avoid segregating or stigmatizing users with physical, sensory or cognitive limitations? What types of guides – pictorial, verbal or tactile – can broadcasters offer using ATSC 3.0 that are not available in the market today and how can broadcasters employ ATSC 3.0 to enhance access to primary and supplemental over-the-air television services for those with physical, sensory or cognitive limitations? What will broadcasters' responsibilities be to deliver these enhanced accessibility features, including additional streams of accessibility information delivered via broadband or through additional programming streams?

5. Emergency Alerts

The transition to the ATSC 3.0 standard should not alter broadcasters' responsibility to provide emergency alert information and to make emergency alerts accessible to persons with disabilities. As broadcasters use the ATSC 3.0 standard to deliver their programming to new

³⁹ 47 C.F.R. §§ 79.1, 79.3 (requiring video programming distributors, including broadcasters, to either provide closed captioning and video description for nonexempt video programming that they distribute or pass through closed captions and video descriptions where programming already has it).

⁴⁰ See Tom Butts, *ATSC 3.0 Expands Closed-Caption Offerings*, TV TECHNOLOGY (Aug. 20 2015), <http://www.tvtechnology.com/news/0002/atsc-30-expands-closedcaption-offerings/276791>.

platforms, including mobile devices, they must ensure that they continue to deliver emergency alerts to the relevant geographic locations and in an accessible format. The FCC's rules require broadcasters to participate in the Emergency Alert System ("EAS").⁴¹ Broadcasters must also make local emergency information accessible to persons who are deaf or hard of hearing, and to person who are blind or have visual disabilities.⁴²

The ATSC 3.0 development team is creating advanced emergency alert capabilities for the new standard, including interoperability with existing alerting systems.⁴³ Should the FCC require broadcasters to implement all of these advanced features? What type of rules should govern the wake-up capability for end-user equipment? Should the FCC mandate this functionality into the EAS standard? Conversely, should the FCC prohibit broadcasters from using this functionality for commercial programming that is not user directed? Should broadcasters integrate emergency alerts into complementary broadband delivered content? Can the narrowcasting potential of ATSC 3.0 allow for more targeted emergency alerts? Do those capabilities allow broadcasters to support additional categories of alerts that might not warrant support under the current EAS rules? Should next-generation alerts support messages with video, photos, and graphics in addition to text and audio? What actions would need to be taken now to ensure ATSC 3.0 deployments support these types of innovations? And what other advanced features should the FCC require as part of the ATSC 3.0 emergency alert functionality?

6. Public File Disclosure Obligations

Broadcast television stations and applicants for new stations must maintain and make available for public inspection a public file that contains detailed information about the

⁴¹ See generally 47 C.F.R. Part 11.

⁴² 47 CFR 73.1250(h).

⁴³ See *Advanced Emergency Alerting Addressed by New ATSC 3.0 I-Team*, ATSC.ORG (last visited May 24, 2016), <http://atsc.org/newsletter/new-i-team-working-on-advanced-emergency-alerting-for-atsc-3-0/>.

programming that the broadcaster airs to meet the needs and problems of their community.⁴⁴ The public file must include information on “among other things, citizen agreements, records concerning broadcasts by candidates for public office, annual employment reports, letters and e-mail from the public, issues/programming lists, records concerning children's programming commercial limits, and children's television programming reports.”⁴⁵

The ATSC 3.0 transition does not alter broadcaster’s obligations to maintain a public file. The FCC must instead consider how each station’s public file will continue to provide useful and relevant information in an accessible and digestible format. For example, the Commission must address what new categories of information broadcasters should include in their public file after the ATSC 3.0 transition, including information on each broadcast stream and the availability of complementary content. Additionally, the internet provides additional opportunities for broadcasters to make their public file available apart from the FCC’s requirement that broadcasters provide a link to their public file on their website.⁴⁶ Should broadcasters be required to provide a link to their public file through other avenues such as mobile-enabled websites or mobile applications? Will the availability of broadcast programming on new devices open additional avenues by which broadcasters can make their public files, or other information, accessible?

V. ATSC 3.0 CAN, AND MUST, COEXIST WITH THE EXISTING TVWS DEPLOYMENT

As the Commission knows well, the growing demand for spectrum access to suit an ever increasing number of devices and use cases, combined with the insatiable demand of consumers

⁴⁴ 47 C.F.R. §§ 73.3526, 73.3527.

⁴⁵ Public Notice, ¶ 15; 47 C.F.R. §§ 73.3526, 73.3527.

⁴⁶ Standardized and Enhanced Disclosure Requirements for Television Broadcast Licensee Public Interest Obligations, Second Report and Order, 27 FCC Rcd 4535, 4585 (2012) (requiring stations that have websites to place a link to the online public file on their home page); 47 C.F.R. §§ 73.3526(b)(2), 73.3527(b)(2).

and enterprise customers for wireless capacity, has changed the way in which we regard the rolls of licensed and unlicensed. Two decades ago, at the beginning of the mobile age, the Commission and policymakers regarded unlicensed spectrum as “junk bands.”⁴⁷ Now, Congress and the Commission recognize unlicensed spectrum access as playing a unique and critical role in the wireless ecosystem.⁴⁸ Licensed and unlicensed spectrum, once considered rival technologies, are now indispensable compliments. “Wi-Fi first” mobile providers such as Republic Wireless use unlicensed spectrum supplemented with leased MVNO capacity,⁴⁹ while mobile network providers such as AT&T and Verizon could not manage their networks without using Wi-Fi offload.⁵⁰

A. Importance of the TVWS

Of the decisions impacting unlicensed and other forms of shared spectrum made by the FCC in the last decade, none has proven more influential and successful than the decision to authorize use of the TV white spaces (TVWS). Despite the uncertainty that continues to surround the availability of TVWS on a nationwide basis, the development and use of the TVWS continues to thrive. Already, TVWS devices have become an important addition for wireless ISPs providing service in rural America – often providing the approximately 3 million Americans and businesses served by WISPs with their only source of affordable broadband access.⁵¹ Carlson Wireless announced last month that it is releasing a new TVWS chipset that

⁴⁷ See generally, Harold Feld, *From Third Class Citizen To First Among Equals*, 15 CommLaw Conspectus 53 (2006).

⁴⁸ See, e.g., Remarks of Commissioner Jessica Rosenworcel, *Moving Wi-Fi Forward* (May 6, 2014), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-326941A1.pdf.

⁴⁹ See Chris Welch, *Republic Wireless finally has good phones to go along with its cheap plans*, The Verge (May 11, 2016), <http://www.theverge.com/circuitbreaker/2016/5/11/11655842/republic-wireless-samsung-galaxy-s7-nexus-6p-announced>.

⁵⁰ See, e.g., Scott Philips, *Mobile Data Offload: A Paradigm Shift in Mobile Networks*, The Hotspot (July 7, 2015), <http://www.boingo.com/blog/2015/07/mobile-data-offload-a-paradigm-shift-in-mobile-networks/>

⁵¹ http://www.wispa.org/Portals/37/Docs/white_papers-case_studies/WISPA-Essential_Role_of_Fixed_Wireless.pdf

will dramatically reduce cost while increasing throughput.⁵² The Commission recently approved innovative TVWS devices for precision farming agricultural services.⁵³

Beyond these initial deployments of TVWS-based technology, the importance of the TVWS rulemaking cannot be overstated. As the first substantial development in next generation unlicensed technology and cognitive radio, the Commission's decision to authorize use in the TVWS has reverberated across U.S. spectrum policy and throughout the world. A number of other countries have begun to adopt and approve TVWS technology, prompting the IEEE to declare use of the TVWS one of the 3 best ways to end the global digital divide.⁵⁴ The Commission's most recent step forward in creating new rules for enhanced spectrum sharing, the adoption of Citizens Band Radio Service Rules, depends on a spectrum access system that has evolved from the TVWS.⁵⁵

B. ATSC 3.0 And The TVWS, With Proper Planning, Create Strong, Mutually Beneficial Synergies

As the Commission and broadcasters are well aware, one of the greatest challenges for new entrants into the spectrum market place is reaching economies of scale with regard to chipsets and market adoption. Individual broadcasters looking to offer new IP-based services using ATSC 3.0 will face the same challenges they have faced in their efforts to market their ancillary spectrum services – fierce competition from wireless carriers, difficulty in getting

⁵² See Press Release, *Carlson Wireless Announces New Chipset-Based White Space Radio To Significantly Reduce Cost and enhance Performance of TV White Space Devices and Networks* (April 27, 2016), available at <http://www.realwire.com/releases/Carlson-Wireless-Announces-the-First-Chipset-Based-White-Space-Radio>

⁵³ See *In the Matter of Deere & Company Request for Limited Waiver of Part 15 Rules for Fixed White Spaces Device*, Order, ET Docket No. 15-184, DA 16-307 (rel. Mar. 24, 2016).

⁵⁴ Amy Nordrum, *3 Ways to Bridge The Digital Divide*, IEEE Spectrum (Apr. 14, 2016), <http://spectrum.ieee.org/tech-talk/computing/networks/3-ways-to-bridge-the-digital-divide>

⁵⁵ See *In the Matter of Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Order on Reconsideration and Second Report and Order, GN Docket No. 12-354, FCC 16-55 (rel. May 2, 2016).

development and adoption of chipsets, and lack of interest by consumers and enterprise customers in light of these issues.

With the success of TVWS, however, broadcasters can take advantage of the availability of the TVWS infrastructure and the interest of tech giants such as Microsoft in deploying TVWS enabled devices for the Internet of Things (IOT). The TVWS database was designed so that spectrum licensees could make spectrum available for lease. Properly managed, the conversion to ATSC 3.0 could provide additional spectrum and accelerate the deployment of TVWS in urban markets, while TVWS provides an existing set of compatible chipsets and spectrum leasing tools for broadcasters interested in monetizing their available excess capacity.

Enabling this synergy would benefit both broadcasters and the unlicensed ecosystem as a whole, a substantial public interest benefit that the Commission should encourage.

C. Broadcasters Must Not Use ATSC 3.0 To Foreclose The Use of the Public Spectrum

Unfortunately, over the course of the TVWS rulemaking and the rulemaking surrounding the Incentive Auction, broadcasters have failed to recognize the value to them of a robust TVWS ecosystem. To the contrary, the National Association of Broadcasters (NAB) has traditionally taken an adversarial posture with regard to TVWS. While NAB's excessive concern about the possible risk of interference is understandable, it has unfortunately prevented NAB from fully realizing the benefits to broadcasters of embracing TVWS devices as a useful supplement to their own spectrum use.

While Commenters believe that the conversion to ATSC 3.0 will offer a fresh opportunity for valuable collaboration, it is entirely possible that the NAB and others will continue to see TVWS as a threat and will raise unwarranted demands with regard to limiting even further the use of the white spaces on an unlicensed basis. The Commission should be very clear that it will

not allow private licensees to foreclose the spectrum commons by demanding increased restrictions on TVWS devices to purportedly protect their non-free OTA services.

Again, it is important to stress that broadcasters have received their free licenses for the express purpose of providing free over the air broadcasting to their local communities. The Commission’s interference protection rules for TVWS were designed to protect this public good because a vital, free over the air television system promotes the creation and availability of news and diverse viewpoints – “a governmental interest . . . of the highest order.”⁵⁶ The interference rules were *not* designed to allow broadcasters to monetize their free spectrum for their private gain.

To be clear, Commenters do not propose that the Commission should prioritize unlicensed TVWS use over the licensed use of the spectrum by broadcasters. However, in light of past hostility from NAB toward the TV White Spaces, the Commission should make clear at the outset that it will reject any efforts to foreclose the spectrum commons.

⁵⁶ *Turner Broadcasting, Inc. v. FCC*, 520 U.S. 180, 190 (1997)

VI. CONCLUSION

The ATSC 3.0 transition will enable broadcasters to more efficiently deliver their programming and provide new ways for consumers to access broadcast programming. ATSC 3.0 will also permit broadcasters to offer exciting new services delivered over IP to complement their broadcast programming. Yet broadcasters are still using public spectrum to deliver programming and services and must therefore continue to meet their existing public interest obligations. The Commission must ensure that any new features that broadcasters offer through ATSC 3.0 continue to serve the fundamental public interest principles of localism and diversity. All consumers should benefit from advances in broadcast technology.

Respectfully submitted,

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