

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

In the Matter of)
)
Joint Petition for Rulemaking of America’s)
Public Television Stations, The AWARN Alli-)
ance, The Consumer Technology Association,) GN Docket No. 16-142
and The National Association of Broadcasters)
Seeking to Authorize Permissive Use of the)
“Next Generation TV” Broadcast Television)
Standard)

COMMENTS OF THE ADVANCED TELEVISION SYSTEMS COMMITTEE, INC.

The Advanced Television Systems Committee, Inc. (“ATSC”) is pleased to submit these Comments in support of the above-referenced Joint Petition for Rulemaking (the “Petition”).¹ The Petition seeks authority from the Federal Communications Commission (“FCC” or “Commission”) for broadcasters to voluntarily begin utilizing the ATSC 3.0 transmission standard to deliver Next Generation TV to consumers. The ATSC developed the ATSC 3.0 next-generation television broadcast standard, and is therefore uniquely qualified to affirm that ATSC 3.0 represents the future of broadcasting.

Consumers and broadcasters alike will benefit from the awesome picture and sound, enhanced content delivery to fixed and mobile devices, and life-saving public alert features made possible by ATSC 3.0. The ATSC applauds the Commission for fast-tracking the Petition, and urges the agency to continue moving forward expeditiously to usher in a new era of television broadcasting.

¹ Media Bureau Seeks Comment on Joint Petition 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, *Public Notice*, GN Docket No. 16-142, DA 16-451 (rel. Apr. 26, 2016).

I. BACKGROUND

The ATSC, an international, non-profit organization working to develop voluntary standards for digital television, is very proud of its work developing the ATSC 3.0 standard, which represents such a quantum leap forward that it is certain to fuel the future of broadcasting for generations to come.

The ATSC has approximately 150 member organizations representing the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries. Formed in 1983, the ATSC developed the current ATSC Digital Television Standard (now known as “ATSC 1.0”), which was adopted by the Commission in 1996 and has been serving American consumers with HDTV and multicasting services since 1998.

ATSC 3.0 is being designed from the ground up to be a next-generation broadcast television standard. Planning and analysis work on ATSC 3.0 began in May 2010, with the standards development work commencing in September 2011. Within the ATSC Technology Group developing ATSC 3.0, more than 30 specialist groups, subcommittees and ad hoc groups are actively engaged, participating in nearly 600 meetings in 2015 alone. Over the past year, ATSC expert volunteers spent an estimated 24,770 person-hours developing the ATSC 3.0 standard.

While work required to finalize the 20 standards comprising the suite of ATSC 3.0 standards continues today, the major core elements have been defined and are in the final stages of standardization. Specifically related to the Petition, it is important to point out that the ATSC 3.0 Physical Layer transmission system, which among other things addresses RF interference considerations, is essentially complete.

II. ATSC 3.0 REPRESENTS THE FUTURE MADE AVAILABLE TODAY

Unlike the current standard, ATSC 3.0 is based on Internet Protocol technology. It is, in fact, the world's first IP-based broadcast transmission platform. As such, ATSC 3.0 merges the best capabilities of over-the-air and broadband viewing. ATSC 3.0 will allow broadcasters to present consumers with “more,” “better” and “new”— more streams, more choices, more channels, more flexibility, better picture, better sound and new personalization and interactive features that will enhance the experience of watching broadcast content. ATSC 3.0's use of Internet Protocol, HTML5 and other web technologies enables the marriage of broadcasting and the Internet and its rich ecosystem of content, services and consumer devices.

The new standard supports the delivery of 4K Ultra High-Definition TV with Wide Color Gamut and High Dynamic Range, which create a more detailed picture and theater-like audio. With its enhanced mobile viewing capabilities, ATSC 3.0 also makes it possible for consumers to watch their favorite broadcast shows, check local weather, and “tune-in” to breaking news on-the-go from their tablet or smartphone. Consumer-friendly usability and personalization features, such as alternate versions of primary content, social media content, and interactive access to related secondary content, including in-depth news and second-language features, are also made possible by ATSC 3.0.

In addition, the standard will facilitate dramatic improvements in the robustness of signals, allowing improved indoor and mobile reception for the growing number of American households relying, in whole or in part, on over-the-air broadcasting to receive linear television programming. ATSC 3.0 also supports accessibility advances, such as multiple closed-captioning services and assistive audio for improved video description intelligibility. Equally significant, the standard has the potential to deliver enhanced emergency alerts and the capability to wake-up devices in “sleep” mode to deliver time-sensitive, often life-saving emergency information.

Just as consumers will benefit from ATSC 3.0, so too will broadcasters. The next generation broadcast platform made possible by ATSC 3.0 is exceptionally robust. It facilitates simple deployment of Single Frequency Network transmission systems that can greatly improve signal reception, particularly on mobile devices and television sets without outdoor antennas. As such, the platform can deliver TV signals deep inside buildings and on-the-go, allowing broadcasters to reach their audiences anytime, anywhere. New audience measurement tools also come with ATSC 3.0, as do advanced advertising features such as interactive and real time ad-targeting capabilities.

III. THE TIME IS RIGHT TO ALLOW BROADCASTERS THE OPTION OF UTILIZING ATSC 3.0

The fact that the deployment of ATSC 3.0 technology will coincide with the repack of TV spectrum following the broadcast incentive auction is serendipitous. Broadcasters required to change channels as a result of the repack may find it a convenient time to invest in ATSC 3.0-compatible transmission equipment, some or all of which may be reimbursable from the TV Broadcaster Relocation Fund. The time may also be right to negotiate simulcasting arrangements as broadcasters seek to cooperate with one another in order to facilitate a smooth transition to the post-auction world.²

Broadcasters can also combine their repack-related consumer education campaigns with announcements informing consumers about the availability of Next Generation TV. Given all the benefits of ATSC 3.0, consumers may elect to purchase equipment or devices that will allow them to receive an ATSC 3.0 signal as well as the existing ATSC 1.0 signal. Otherwise, broad-

² The Petition asks the Commission to amend its rules to allow broadcasters to enter into market-by-market deployment plans facilitated by simulcasting agreements. Specifically, the Petition lays out a framework whereby a temporary “host” broadcaster would agree to carry on one of its DTV subchannels the programming of a station broadcasting with the ATSC 3.0 format. The “host” station’s programming would then be carried reciprocally as a programming stream on the station deploying the ATSC 3.0 standard. Petition at 17-18.

casters' simulcasting arrangements will ensure that consumers continue to receive ATSC 1.0 broadcast service without interruption using their current equipment. Also serendipitous is the fact that South Korea is expected to adopt a version of ATSC 3.0 this summer. Korean broadcasters plan to embark upon their own digital-to-digital transition starting as early as February 2017, ahead of the 2018 Winter Olympics in PyeongChang. Lessons learned by South Korean broadcasters and manufacturers from the transition will help facilitate ATSC 3.0 deployment in the United States. What's more, by the time American consumers and broadcasters are ready to fully embrace Next Generation TV, equipment that will allow them to do so will already be available thanks to efforts by manufacturers of professional and consumer products to supply ATSC 3.0-capable equipment for South Korea.

IV. AN FCC RULEMAKING WILL PROVIDE CERTAINTY TO THE VOLUNTARY ATSC 3.0 EVOLUTION

As the Petition makes clear, ATSC 3.0 would be implemented on a *voluntary* basis.³ Indeed, the rule changes required for voluntary ATSC 3.0 implementation are modest. No changes are needed to the Commission's current receiver mandates, the Commission's policy regarding essential intellectual property for FCC-authorized standards, or the Commission's programming-related policies and rules. As such, allowing broadcasters to voluntarily implement ATSC 3.0 is simple from a regulatory perspective, and the certainty that a rulemaking provides will facilitate the market-based evolution to ATSC 3.0. Moreover, perhaps the most fundamental precept of ATSC 3.0 – from its layered system architecture to its very document structure – is to enable its continued market-based evolution, using protocol signaling approaches that have enabled the Internet to continually evolve and advance.

³ See, e.g., *id.* at ii (“In this petition, we ask the Commission to allow the next evolutionary leap forward in broadcast television, by permitting broadcasters to use this new transmission standard on a voluntary basis.”)

V. **CONCLUSION**

The ATSC commends the Commission for its prompt action in response to the Petition. To keep pace with innovations already occurring in the market and to help set the stage for future advances, the Commission should continue to move forward through the rulemaking process expeditiously. The ATSC looks forward to working with the Commission on the further development and implementation of ATSC 3.0.

Respectfully submitted,

THE ADVANCED TELEVISION SYSTEMS COMMITTEE, INC.

_____/S/
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