

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

In the Matter of)
)
Upgrade to the Next Generation) GN Docket No. 16-142
Digital Television Service)

COMMENTS OF PEARL MOBILE DTV COMPANY LLC

Pearl Mobile DTV Company LLC (“Pearl”) urges the Federal Communications Commission (“FCC”) to promptly move forward with a Notice of Proposed Rulemaking on adoption of the additional broadcast transmission standard developed by the Advanced Television Systems Committee (“ATSC”), Next Generation TV, and allow broadcasters the option to use the physical layer of this new standard (“Next Generation TV” or “ATSC 3.0”) while they continue to deliver current-generation DTV broadcast service to their communities.¹ The Joint Petition for Rulemaking filed by APTS, AWARN Alliance, CTA, and NAB represents an historic coming together of varied interests united in their vision of “allowing[ing] the next evolutionary leap forward in broadcast television, by permitting broadcasters to use this new transmission standard [ATSC 3.0] on a voluntary basis.”² Commission action on the Petition will facilitate this evolutionary leap, which “will be accomplished in an entirely voluntary

¹ Pearl is a venture of U.S. broadcast companies with a shared interest in exploring forward-looking broadcast opportunities, including innovative ways of promoting local broadcast TV content and developing digital media and wireless platforms for the broadcast industry. Its membership, comprising more than 200 network-affiliated TV stations, consists of many of the largest broadcast companies in America, including: Cox Media Group, the E.W. Scripps Company, Graham Media Group, Hearst Television Inc., Media General Inc., Meredith Local Media Group, Raycom Media, and TEGNA Inc.

² Joint Petition for Rulemaking submitted by America’s Public Television Stations, AWARN Alliance, Consumer Technology Association, and the National Association of Broadcasters at p. ii (April 13, 2016).

manner by the broadcasting and consumer electronics industries working in tandem to extend this new service to broadcasters' communities, without mandatory timelines for either broadcasters or receiver manufacturers to adopt the new standard.”³

Next Generation TV gives broadcasters a revolutionary new tool to serve the public. Its benefits are substantial: consumers will experience higher quality picture and sound, receive enhanced emergency alert information, and have the ability to receive reliable programming on mobile and handheld devices such as tablets and smartphones. Furthermore, the deployment process will be largely market-driven and will not require the Commission to allocate any funds or spectrum. Pearl and other industry members have been working for a substantial period of time to develop a deployment plan, and are committed to the success of this process. We urge the Commission to move ahead as quickly as possible to permit the American public to benefit from this new technology, and to permit the United States to maintain its technology leadership position in the world community as other countries move forward with Next Generation TV.⁴

I. Next Generation TV Provides Viewing Enhancements and Public Safety Benefits to Consumers.

Next Generation TV will provide myriad significant benefits to consumers. In particular, it will facilitate a dramatically enhanced viewing experience, increase emergency alert capability, and permit reliable mobile broadcasting. Consumers are eager to have access to the improvements Next Generation TV can provide. According to a study conducted this spring by Frank N. Magid Associates (“Magid”), the vast majority of consumers believe the new standard

³ *Id.* at p. iv.

⁴ See *Korea to Launch ATSC 3.0 Broadcasts in 2017*, TV TECHNOLOGY (Feb. 24, 2016), <http://www.tvtechnology.com/atsc3/0031/korea-to-launch-atsc-30-broadcasts-in-2017/278022>.

“will result in a better viewing experience because of bigger and better picture, more free channels, better audio quality, and enhanced interactivity.”⁵

Next Generation TV will support video resolutions beyond HD, higher frame rates, wider color gamut, and high dynamic range (“HDR”) video on both home and mobile screens. Not only will Next Generation TV support the current latest technology -- 4K ultra-high definition (“UHD”) transmissions -- it will ensure that advances to come, including 8K transmissions and beyond, will be able to be implemented without any need for additional regulatory action. Along with higher resolution and better picture quality, Next Generation TV will support a deeply immersive audio experience with accurate sound localization, customizable sound mixes, and a greater sense of spatial sound envelopment. Sixty percent of the respondents Magid surveyed stated that they were interested in purchasing a 4K Ultra HDTV, and more than half of those surveyed said they would be looking for a product that offered HDR video to enhance viewing.⁶

Beyond dramatically improved picture and sound, Next Generation TV will support the ability to offer multiple views associated with the same program, displayed on a single screen or on multiple screens. For example, users could experience a panoramic view of sports programs, with multiple views of an event integrated seamlessly into the picture, and the ability to pan, zoom or select individual views from different camera angles. Next Generation TV could also allow an unprecedented level of viewer personalization and interactivity. Users could access related secondary content -- such as extra information (player statistics, product information, in-depth news), alternate versions of the primary content, user-generated content, and interactive

⁵ Frank N. Magid Associates, “Survey Says Consumers Like Bigger, Better Picture and Immersive Audio Capability of Next Generation Television Broadcasting,” Press Release (Apr. 15, 2016).

⁶ Frank N. Magid Associates, *Consumers Reaction to ATSC 3.0*, May 2016.

content -- and be able to set their preferences for this content so it would be generated automatically. Dynamic flexibility is built into Next Generation TV. For example, when a football game goes into overtime, some viewers could continue watching it, while others could elect to watch the regularly scheduled programming transmitted by the same broadcaster. This capability to personalize content ranked particularly highly among Magid survey respondents.⁷

Next Generation TV will also support accessibility advances, such as multiple closed-caption or subtitle services. Assistive audio services may include one or more video description tracks, multiple alternate language tracks, the option to have the original dialogue remain audible or silent, and the ability to adjust dialogue volume relative to other soundtrack elements to improve intelligibility.

The new standard will also enable life-saving advancements in emergency alerting. Broadcasters will be able to deliver reliable and robust mobile alerts to smart phones, tablets and fixed TV receivers without the inherent incapacity of one-to-one mobile phone architecture that demonstrably fails in crisis situations when the system is overloaded with users. Advanced emergency alerting options in Next Generation TV includes:

- Signaling that permits receivers to alert consumers of an emergency even when the receiver is powered off. This functionality can be used to cause the receiver to “wake up” to process emergency alert information -- an invaluable advance, particularly in areas prone to tornadoes, earthquakes, and other sudden disasters (in addition to man-made emergencies);
- Localization filtering of emergency alerts to tailor information for specific geographic areas; and

⁷ *Id.*

- Enhanced datacasting to serve law enforcement, first responder, and emergency management organizations more efficiently, including transmission of targeted video files, and link them with the public more effectively. This data could include the addition of rich media such as Doppler tracking radar and detailed evacuation route maps.

Broadcasters can deploy these new services in addition to those that are required by regulation to provide a more extensible and capable system for the benefit of the public. More than two thirds of the respondents Magid surveyed were enthusiastic about the idea of enhanced emergency alerts on all devices during the approach of severe weather or other emergencies, and appreciated the fact that broadcast services would work even when cell reception and traditional cable service might be out of service.⁸

Finally, Next Generation TV will allow dramatic improvements in the robustness of signals, enabling improved indoor reception and enhanced mobile broadcasting capability. With ever-greater numbers of American households relying, in whole or in part, on over-the-air broadcasting to receive television programming, more robust in-home reception will heighten the ability of the public to receive not only high-quality entertainment programming but also enhance the public's access to life-saving news, emergency, and weather broadcasts. Mobility will also expand the reach of these broadcasts and greatly enhance the ability of the public to receive them and other sought-after programming on the go. Unlike previous iterations of mobile TV, Next Generation TV builds in native mobility from the very beginning, and has been engineered to serve devices in motion. Respondents to the Magid survey stated that they use their smartphones the most of every device they own, but also ranked their experience watching

⁸ *Id.*

videos on smartphones or tablets less favorably than on all their other devices.⁹ Approving the Next Generation TV standard will change this. Pearl urges the Commission to approve the Next Generation TV transmission standard as a new, optional standard for television broadcasting so that the process of creating these benefits for the public can begin.

II. Permitting Next Generation TV to Be Voluntarily Deployed As Soon As Possible Will Benefit Broadcasters and the Public

While Next Generation TV is not backward compatible with existing television receivers (just as the current the current DTV standard was not backward compatible with analog standard), it can be implemented seamlessly, without disenfranchising viewers, and in concert with the repacking following the spectrum auction in order to maximize the number of stations that will have the ability to upgrade if they so choose. Unlike the analog-to-DTV transition, the proposed rule provides for parallel implementation with the existing digital television standard in a voluntary, market-based manner. This means that in one DMA, consumers would have access to stations that have deployed Next Generation TV while also having access to all the stations which will continue to transmit using the current DTV standard. The transition will be effectuated by broadcasters arranging to simulcast their respective signals so that all viewers will be able to receive their signal free and over-the-air in the format they choose. Pearl urges the Commission to approve the ministerial rule changes and pronouncements required to permit this type of parallel implementation, which will serve to preserve the Commission's resources while giving broadcasters a strong incentive to voluntarily move forward.

After making the minor rule changes required to permit this new standard and allow simulcasting, the Commission can rely on market solutions to ensure smooth deployment. The

⁹ *Id.*

Commission would not have to allocate a second channel to broadcasters, instead broadcasters will rely on market solutions to share facilities during the adoption period. As stations deploy Next Generation TV, they will arrange for their programming in the current standard to be simulcast in the legacy standard on another station in the community in order to satisfy the greatest number of viewers. Over time, new consumer devices will replace existing ones that are capable of receiving the Next Generation TV signal, just as color TV replaced black and white and new smartphones replaced older models. Innovators may also deploy new technologies. Driven by consumer demand and competition, broadcasters will accomplish tremendous technological strides if the Commission authorizes the new standard.

III. Conclusion

Adopting the Next Generation TV standard and permitting stations to deploy it on a voluntary basis will provide consumers with substantial viewing and public safety benefits. Acting now will allow stations to bring these benefits to their communities as soon as possible. Pearl urges the FCC to promptly issue a Notice of Proposed Rulemaking on this issue to enable it to approve the new standard and make the ministerial rule changes and pronouncements required to implement the voluntary transition to Next Generation TV.

Respectfully submitted,



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