

# NextGen TV: What's on in the US

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POWERED BY  
ATSC 3.0

# ATSC OVERVIEW

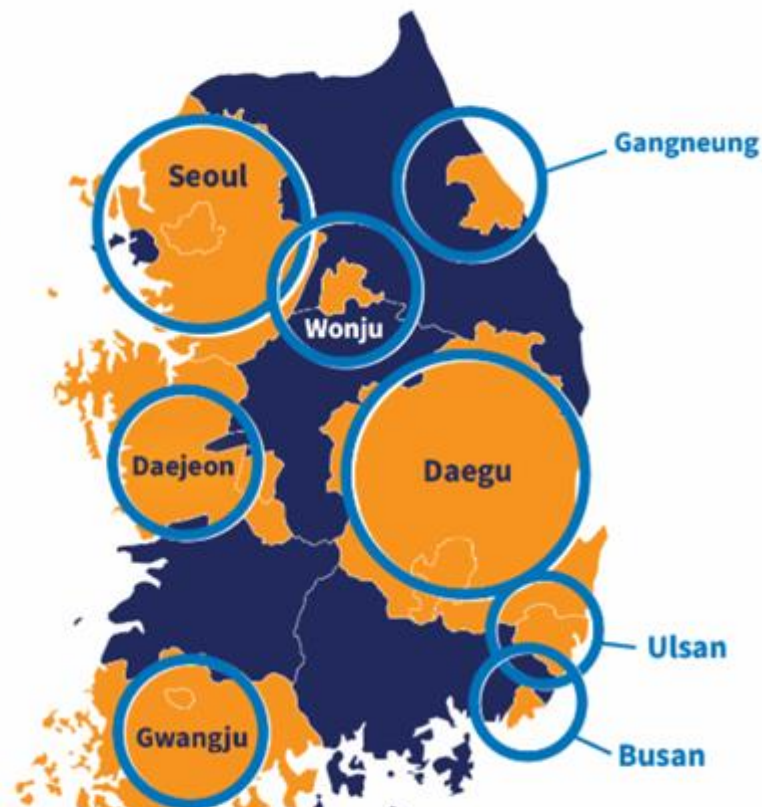
- Standards development organization for digital television
  - Founded in 1983 by CEA, IEEE, NAB, NCTA, and SMPTE
  - Focused on terrestrial digital television broadcasting
- ATSC is an open, due process organization
  - Approximately 140 member organizations
  - Broadcasters, broadcast equipment vendors, cable and satellite systems, consumer electronics and semiconductor manufacturers, universities
- ATSC Mission Statement:
  - To create and foster implementation of voluntary Standards and Recommended Practices to advance terrestrial digital television broadcasting, and to facilitate interoperability with other media.

# ATSC 3.0 – Key Advancements

- Physical Layer – flexible, configurable, world’s most efficient one-to-many DTT system
- Transport – IP-based protocol via MMPT and ROUTE/DASH
- Video - UHD, HDR, WCG, HFR, scalable video coding via HEVC H.265
- Audio – immersive audio, personalization via Dolby AC-4, MPEG-H Audio
- Apps – web-based interactivity via HTML5, CSS, JavaScript and Websocket APIs
- Accessibility – new capabilities for visually and hearing-impaired audience
- Advanced Emergency Messaging – new rich media capabilities and receiver “wake-up”
- Datacasting – ability to deliver data to IoT, e.g., cars, agriculture, signage, smart cities, etc.
- Convergence Ready – designed to easily interoperate with other IP data delivery networks

## DEPLOYMENTS

### SOUTH KOREA DEPLOYMENTS



South Korea literally paved the road to ATSC 3.0, adopting its Next Gen TV standard in 2016 and launching 4K Ultra High Definition ATSC 3.0 broadcasts in May 2017. Momentum continues to build since the landmark UHD broadcasts of the Winter Olympics, and ATSC 3.0 services now reach over 70% of the population.

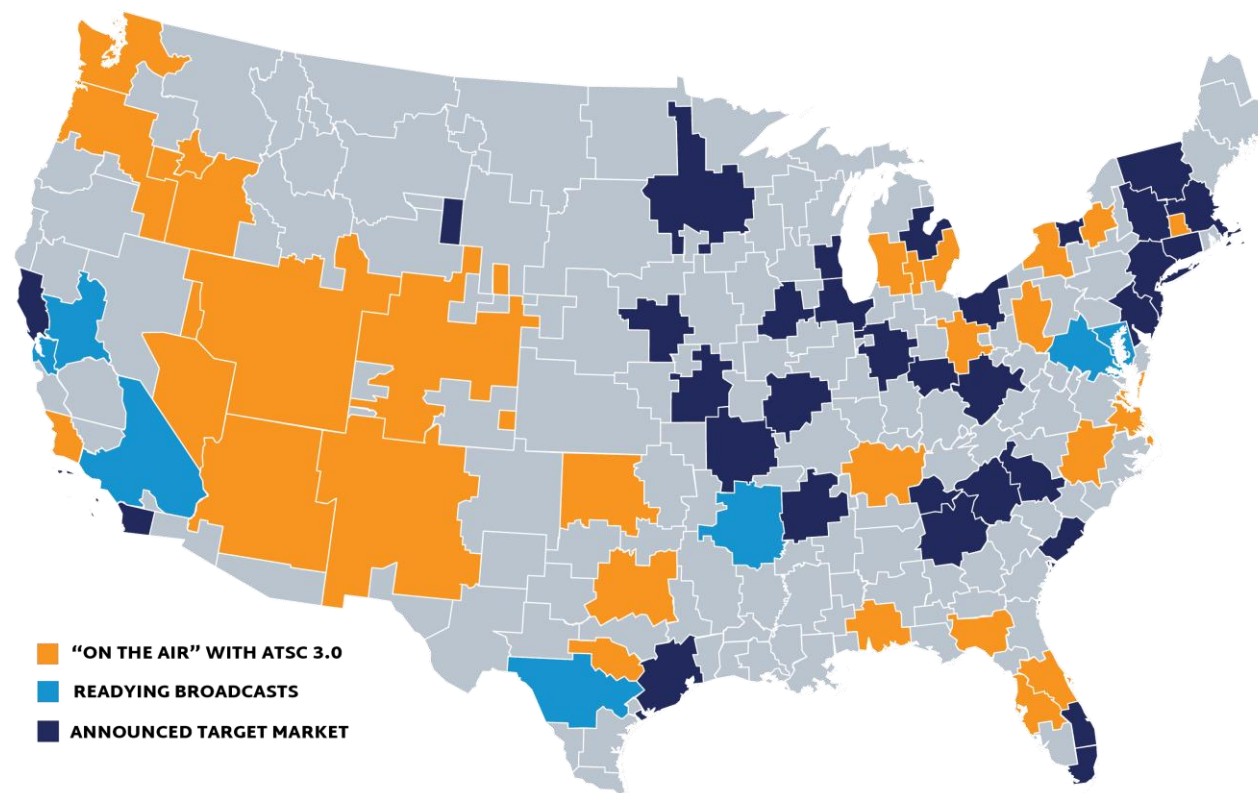
In addition to UHD, broadcasters in South Korea continue developing new services on the country's ATSC 3.0 service roadmap.

#### ■ "On the Air" with ATSC 3.0

## DEPLOYMENTS

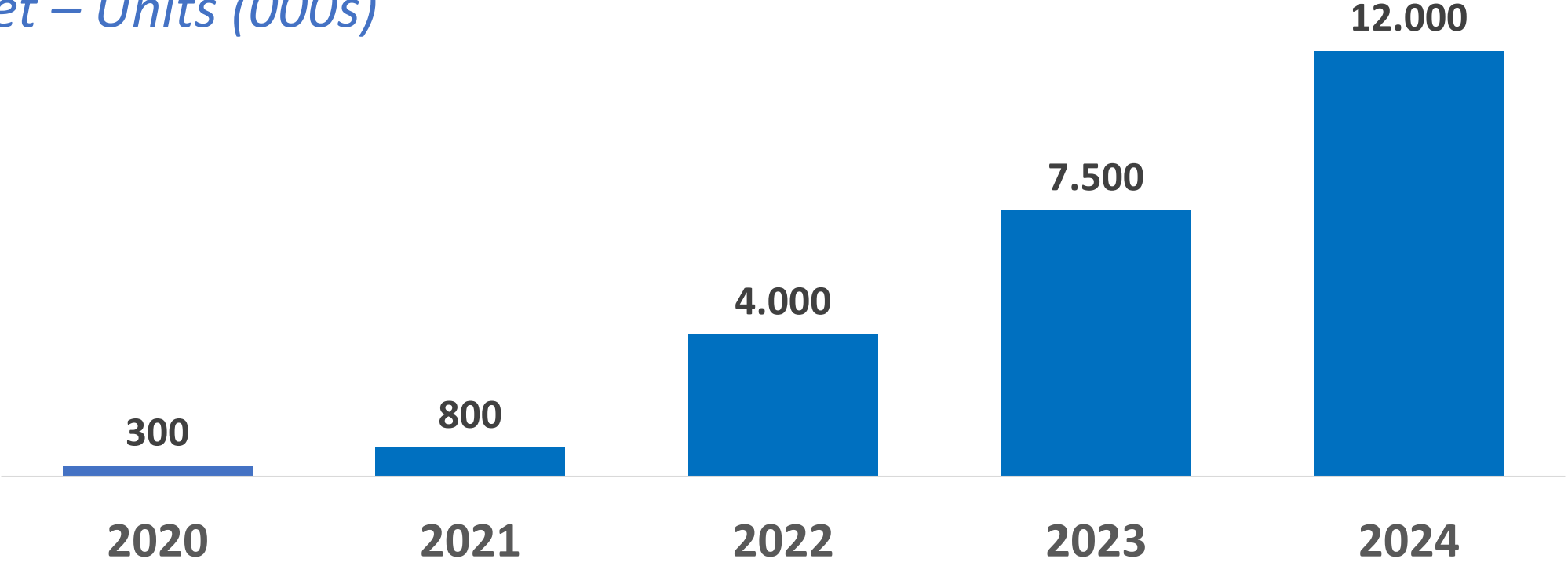
Broadcasters have announced that they are working together to bring ATSC 3.0 first to 62 markets across the country, which collectively would mean next-generation TV reception by more than 75% of all viewers. Those 62 “First Markets” are indicated on this map. Each “first market” (in dark blue) will transition to readying broadcasts (in light blue) and then on-the-air with ATSC 3.0 (in orange.)

### UNITED STATES DEPLOYMENTS



# TV Shipments with NEXTGEN TV

*U.S. Market – Units (000s)*



	2020	2021	2022	2023	2024
% of Total DTV		2	10	19	31
% Change (YoY)		167	400	88	60
LTD Shipments (000s)		1.1	5.1	12.6	24.6

Source: CTA, U.S. Consumer Technology Five-Year Industry Forecast, 2019-2024, January 2021

# DTT in the Global Digital Network Ecosystem

DTT broadcasters are operating in a global ecosystem of data delivery networks

Data session steering, switching, and sharing across heterogeneous networks can improve spectrum usage efficiency

- Use the most appropriate network(s) for each given data session in a dynamic fashion

Next Gen DTT systems (ATSC 3.0 / DVB-T2) are the most efficient physical layers for one-to-many data delivery in the world

- TV and non-TV uses
- Fixed and mobile uses
- Can be leveraged for convergence with other data delivery networks, e.g., Internet, LTE/5G

Convergence among the four major DTT technologies facilitates convergence with other networks (and may be necessary)



# Convergence Among DTT Technologies

ATSC believes that global DTT convergence is a valuable goal and will seek and respond to opportunities for convergence

ATSC 3.0 Interactive system and HbbTV have much in common

Both have a technical backbone aligned with W3C technologies

- TV-specific features need to be added to W3C technologies in both systems
- ATSC 3.0 uses websocket APIs to accommodate TV-specific features
- See A/344, which is available for free at <https://www.atsc.org/atsc-documents/type/3-0-standards/>

Regardless of the technology behind the user experience, the viewers know what they like

ATSC appreciates the progress that HbbTV has made for commercial deployments

We hope to learn and share with our HbbTV colleagues about what interactive user experiences work for viewers and broadcasters



**Thank you.**

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