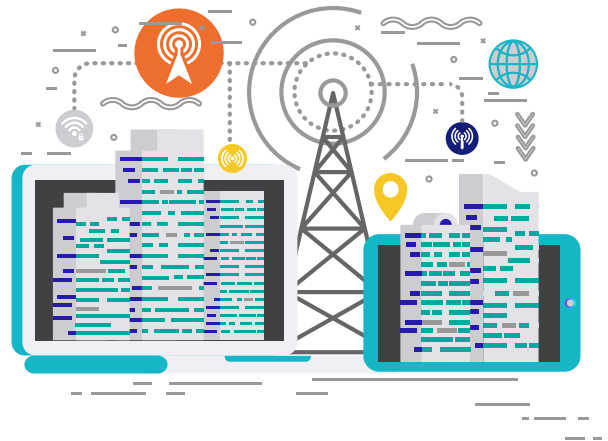


Closing the Digital Divide with Unlicensed Spectrum



Americans depend on the internet to access healthcare services, education opportunities, and participate in the global economy. Unfortunately, about 20 million Americans currently lack access to broadband connections, leaving them on the wrong side of the digital divide. Fortunately, there are some pieces of spectrum available in and around the broadcast television band that can be used to provide internet to millions of Americans. The federal government ultimately makes spectrum allocation decisions in the public interest, so policymakers should recognize that these otherwise vacant resources can be leveraged to close the digital divide and finalize rules governing their use for broadband.



A major reason for the lack of adequate internet connectivity is the high cost of infrastructure deployment. The “last mile” connections—reaching subscribers at their homes—are particularly expensive, especially where there are fewer subscribers to pay for a given stretch of infrastructure.

Yet it is critically important for Americans to access the internet at home. For example, about 70 percent of high school students say their teachers assign homework that requires an internet connection. And a connection at home is essential for the many mobile software-driven healthcare tools ACT | The App Association members provide, from chronic condition management to clinical decision support.

About half of the airwaves set aside for broadcast television in these areas are essentially unused. Television white spaces (TVWS) are the unused spectrum channels near and between television broadcast channels. TVWS help broadband providers solve the broadband deployment cost problem because amplifying a wireline broadband connection over the airwaves is less expensive than using infrastructure to extend the connection to the entire “last mile.”

These channels could be used to transmit broadband connectivity over long distances, but the FCC must finalize rules governing their use for internet service. According to recent survey data, 88 percent of confirmed voters in the 2018 midterm election support the FCC finalizing rules to ensure these vacant television channels are used for broadband, especially in rural areas.

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Unused spectrum in over-the-air television bands is ideal for mobile:

- White spaces are like high-powered Wi-Fi signals and are a key ingredient to bridging the digital divide affordably.
- Just as TV broadcast channels cover several square miles from a single point, use of TVWS enables data to be transmitted at high speeds over long distances and through obstacles, including buildings, hills, and trees.
- White spaces support high upload and download speeds, like a 4G connection, and will complement future 5G networks.

The good news is TV white spaces are being used now in pilot projects in the following innovative use cases:

- Agriculture – White spaces are supporting wireless connections to fly farmers' drones farther and collect rich data from sensors in the soil, on the drone, and through cameras. Eighty-seven percent of Americans who voted in the 2018 midterm election support the use of TVWS for precision agriculture.
- Education – White spaces are supporting home broadband connections for students in rural areas, drawing from their local school's existing broadband connection and bridging the "homework gap." Eighty-nine percent of 2018 midterm election voters support the use of TVWS for education.
- Healthcare – White spaces are supporting broadband connections in rural areas that don't have easy physical access to a hospital, thus providing a virtual avenue between patients and doctors. Ninety percent of voters in the 2018 midterm election support using TVWS to connect patients with their caregivers.

To support the growth and potential of the dynamic American economy, we urge Congress to:

- Ensure that the FCC reserves sufficient spectrum to support the use of TVWS across the nation and finalizes technical rules to safeguard their use from interference with other services.
- Spur agency coordination of grants to encourage innovation in unlicensed spectrum, enabling business and individual access to the internet.