

North Carolina becomes home of White Spaces network

29 January 2012, by Nancy Owano



(PhysOrg.com) -- America's first commercial "TV White Spaces Network" was launched this week in Wilmington, New Hanover County, North Carolina. Wilmington, as the first U.S. city to shift from analog to digital TV, was chosen as the present-day site of the first commercial network since the city had early access to white spaces in that TV changeover, and was used as the test bed for the new technology. The city has been testing white space applications since 2010.

The network that went live makes use of technology that includes a Spectrum Bridge database along with 1.5-pound white space radios from KTS Wireless and cameras from other vendors.

Florida-based Spectrum Bridge describes itself as a company with a software platform that manages available bandwidth in real-time for licensed and unlicensed spectrum. Devices check the Spectrum Bridge database to prevent interference with local TV signals. Its platform was sanctioned by the FCC as the first TV White Spaces database. Florida-based KTS Wireless says it is a leader in data radio development used in the white space industry.

The KTS device is a small [transmitter](#). According to details in [DailyWireless](#), the white space device operates on all TV channels (174-216 MHz and 470-698 MHz) and in the unlicensed 900 MHz frequencies at data rates from 1.5 to 3.1 MBps.

White spaces, sometimes used in the context of

"Super [Wi-Fi](#)," is being re-tagged by some as "SuperWhiteFi" to more closely describe the unused spectrum between TV stations that resulted from the 2008 transition from analog to digital transmission of TV broadcast. The TV frequencies are lower, enabling signals to travel further, and penetrate foliage and walls better. The tradeoff to achieving more range is less speed. Nonetheless, city officials presiding over the Madison rollout see better range as an important plus for delivering services.

Cameras and wireless Internet access were installed at Wilmington's city parks, where the white space spectrum could allow wireless service to go through trees and thick foliage. According to a press release, the network applications are designed to provide access for local functions such as video-security surveillance and transmitting data about water quality.

Observers say the Wilmington rollout is indicative of what is to come, in a transformation of cities to "smart cities" where the low-frequency spectrum enables broader access for delivering public services, and for monitoring. The vision is that cities will be connected through integrated wireless networking technology to manage congestion, maximize energy efficiency, enhance public safety and provide key services.

Beyond deployment in cities, proponents hope white-space technologies will be deployed in rural areas and other places which standard wireless signals might not access.

While this week's white-space news focused on Wilmington, reports are likely to grow about further developments in standards-based products and services for broadband capabilities via TV band spectrum. One sign is the appearance of an industry group called the WhiteSpace Alliance, which was formed in December to work on standards for [white spaces](#). The Whitespace

Alliance backs the new IEEE 802.22 standard.

More information: www.whitespacealliance.org/

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