

FierceWireless

Rice University brings white-space network to Houston

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Rice University--in partnership with its wireless communications researchers and nonprofit Technology For All (TFA)--announced it will offer prototype in-home white-space hotspot to Houston locals and graduate students involved in putting the trial together.

The first to get a prototype access point was a 48-year-old working grandmother who had difficulty getting a reliable Internet connection. To users, the new hot spot looks like any other. It can be accessed with any Wi-Fi device, but behind the scenes, the network uses "dynamic spectrum access" to automatically shift between traditional Wi-Fi and unused UHF digital TV channels to provide the best possible coverage.

The potential of white space, the slivers of 700-MHz spectrum that has been freed up from TV channels switching from analog to digital signals, hit a fever pitch in 2008 when the FCC voted to move ahead with the conditional unlicensed use of white-space television spectrum.

Big players such as Google (NASDAQ:GOOG) and Microsoft lobbied the commission hard for approval. Larry Page, co-founder of Google declared white space to be "Wi-Fi on steroids" since the spectrum signals promise to have significantly longer range than Wi-Fi technology and broadband access can be spread using fewer base stations resulting in enhanced coverage at lower cost.

But as the final FCC rules are now cemented in the Federal Registry after the FCC voted 5-0 in September to approve rules for white-space devices, few white-space announcements have been made.

Spectrum Bridge has been the most active. The company built out a network in Claudeville, Va., a small rural community lacking broadband connectivity, to show how white spaces can bridge the "digital divide." The city of Wilmington, Del., and the county of New Hanover in North Carolina, launched a white-space network using an experimental license to develop what Spectrum Bridge calls the nation's first smart-city network powered by the vendor's white-space database. In September, Google and Spectrum Bridge, together with the Hocking Valley Community Hospital, announced the deployment of the first white-space broadband network trial for healthcare providers in Logan, Ohio.

It appears white-space networks may be more applicable to rural markets where TV white-space channels are more plentiful. The idea of white space is to use databases that provide geolocation data to determine what frequencies white-space devices could use, thereby preventing interference with TV and other signals. But with heavy use of the spectrum in big markets such as Los Angeles and New York means very few channels would be available for use at a given time.

However, Rice University's move to automatically shift between traditional Wi-Fi and unused UHF digital TV channels could make white-space connectivity more palatable in urban markets.

For more:

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