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FCC Approves 'White Spaces'

The so-called "super Wi-Fi" technology is the first significant block of spectrum made available for unlicensed use in more than 20 years.

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As expected, the FCC approved the unlicensed "white spaces" spectrum Thursday in a rare unanimous vote on an important issue.

Now comes the hard part: bringing the "Super Wi-Fi" technology to market. The white spaces that exist among TV bands in the 470 to 698 MHz frequencies have faster speeds, valuable propagation features and penetrate walls easily while covering wide areas. The technology is expected to go a long way towards mitigating the looming spectrum crisis.

There are a couple of hitches, however. A database will have to be created so users won't interfere with each other and broadcasters and microphone users will have to be convinced the technology won't interfere with their use. The FCC announced solutions to the problems.

First, the FCC said it will reveal the broad outlines of a database in the coming weeks and it has proposed to set aside two channels for use by microphone users and others who otherwise might be subject to interference from white spaces.

There seems to be near universal agreement that the new technology will spur new innovations that will lead to useful end user applications. White space technology promises to be good for business, too.

"This new unlicensed spectrum will be a powerful platform for innovation," said FCC chairman Julius Genachowski. "When we unleash American ingenuity, great things happen."

SpectrumBridge, a Florida firm specializing in spectrum analysis and management, has already found that white space technology is good for business. The company has launched four separate sites based on the technology, even before final specs have been written.

"This approval will place a significant amount of much needed, very valuable, unlicensed spectrum in the hands of industry," said Jeff Schmidt, Spectrum Bridge's director of engineering, in an interview. "More importantly, the FCC's database approach for managing spectrum and mitigating interference on a real time basis firmly establishes a new paradigm in how spectrum can be optimally used. It's a new way of doing things with spectrum."

Noting that its four installations are all "fixed" white spaces, Schmidt said it is likely to take several months before the technology will reach consumers, provided, of course that no opposition to the technology emerges. He added that he hopes the database and the proprietary channels will placate any opponents. The National Association of Broadcasters, which previously had sued the FCC on white spaces, said it is reviewing the FCC decision.

Earlier proposals that would require white space transceivers to have sensors were also dropped by the FCC. Edward Knightly, the principal investigator directing a white spaces R&D project at Rice University, said the elimination of the sensing requirement will speed up implementation of the technology. "It will accelerate time to market," he said in an interview. "And that will give more incentive to industry to develop the technology."

The white spaces approval gives the FCC a much-needed victory and respite from its drawn-out and so far unsuccessful attempts to get approval of its net neutrality and national broadband plan. Chairman Genachowski noted that the approval "is the first significant block of spectrum made available for unlicensed use in more than 20 years."

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