



Federal Communications Commission
Strategic Plan Comments
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445 12th Street, S.W., Room 7- C410
Washington, DC 20554

In the Matter of: FCC Draft Strategic Plan 2006-2011

**Comment of the Wireless Community Network Project
of the Center for Neighborhood Technology**

The Wireless Community Network Project is an innovative approach to providing high-speed wireless broadband connections in low income communities. It was developed by the Center for Neighborhood Technology, a nonprofit organization founded in 1978 that promotes livable, sustainable communities.

The Center for Neighborhood Technology recognizes the potential for using current wireless technology to empower communities through the creation of wireless community networks. These networks are being tested in four communities throughout the State of Illinois. This project is funded by the Department of Commerce's Technology Opportunities Program, the State of Illinois' Department of Commerce and Economic Opportunity, the Grand Victoria Foundation, the City of Elgin and the Northeast Neighborhood Association.

Wireless community networks (WCNs) represent a new, community-based strategy for overcoming the digital divide. WCNs take advantage of Wi-Fi (802.11b networking standard) technology, and combine this with an innovative network model to deliver low-cost, high-speed wireless broadband internet service to underserved neighborhoods.

Wireless technology in a mesh network model acts much like a neighborhood – becoming stronger as more people support it and as more “repeaters” are placed; the network's infrastructure reinforces the concept of a community of users. WCNs draw on the existing infrastructure (i.e., community technology centers, community-based organizations, schools, churches) and related resources (i.e., technical assistance and training, job skill development and placement, education) in a community to deliver broadband signal and services and opportunities on a real-time basis – making it possible for people to fully engage and participate in society – economically, civically, and educationally. The Center for Neighborhood Technology envisions wireless networks as an individual and collective asset-building strategy.

The vital resource of a Wi-Fi mesh network is spectrum. Our network is operating on the unlicensed 2.4GHz band, part of the “open spectrum,” which offers 83.5 Mhz of unlicensed band to a quickly increasing number of radio devices and wireless networks with innovative character. Today’s technology allows communications devices to find the open spaces in the spectrum and use those to transmit data, with no adverse affect on the signals. However, Wi-Fi’s low power levels and the limitation to a small number of frequency bands make it hard to do networking on a grand scale.

Therefore, we recommend that the Commission reserve increasing amounts of spectrum for unlicensed use and introduce innovative spectrum management approaches, such as requiring the application of “intelligent” techniques to protect other radio spectrum users against harmful interference, such as military radar and satellite services. The European Commission just made two specific frequency bands (5150-5350 MHz and 5470-5725 MHz) available for wireless access systems under this condition.

This would bring about a more efficient use of spectrum, crucial to the development and take-up of wireless systems for private as well as public access, as in underserved rural and low income areas.

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