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Abstract: *Standards for Broadband Wireless Access*

While the world's data transmission capacities are growing at an enormous rate, few users have broadband access to them. Each of the wired options for broadband access, including fiber, cable modems, and digital subscriber lines, has limitations and often requires costly infrastructure reconstruction. Fixed broadband wireless access (BWA) is an alternative that may offer quicker infrastructure build-out at a lower cost. Fixed BWA systems are being developed worldwide at many frequencies, typically from 2-66 GHz.

A key issue for the success of these systems is global standardization, which can improve the equipment, bring down the cost, and expand the applicability to lower-volume users. Within the IEEE 802 LAN/MAN Standards Committee, the undisputed world leader in low-level data networking standards, the 802.16 Working Group on Broadband Wireless Access has been developing the WirelessMAN™ family of specifications with hundreds of participants worldwide. IEEE Standard 802.16, sophisticated air interface for 10-66 GHz was completed in 2001, along with a companion coexistence standard, IEEE 802.16.2. A 2-11 GHz specification (IEEE 802.16a) is due in 2002.

This talk provides an overview of BWA capabilities along with a description of the 802.16 standardization effort, including its history, technical content, and plans. The talk will also explain how the U.S.'s National Institute of Standards and Technology has significantly contributed to the acceleration of 802.16's consensus standardization.