IEEE 802.11ad approval steps up marketplace WiGig

January 18 2013, by Nancy Owano

(Phys.org)—IEEE has adopted a new standard, 802.11ad, which marks the advent of 7Gbps wireless. The newly approved standard will be commercially known as WiGig, and the technology behind WiGig is seen as a step forward for wireless mobile use; data transfer rates will be over ten times the maximum speed previously enabled within the IEEE 802.11 standard. This involves fast speeds over short distances; the standard will deliver 7Gbps speeds over 60GHz frequencies.

The IEEE announced that its standards board approved the 802.11ad for providing data rates up to 7 Gbps in an announcement this month. "This amendment is a perfect complement to the existing IEEE 802.11

standard," said the announcement, "acting as the foundation for tri-band networking, wireless docking, wired equivalent data transfer rates and uncompressed streaming video."

That last point is noteworthy in understanding the impact of the new standard, as 802.11ad is not designed to serve as a replacement for consumers' wireless networks; the new standard is designed to complement existing Wi-Fi by providing a fast, direct link between devices. The results would be seen in device docks and wireless peripheral interconnects.

he IEEE 802.11ad "fast session transfer" feature enables wireless devices to seamlessly transition between the 60 GHz frequency band and 2.4 GHz and 5 GHz bands.

The ability to move between the bands in this fashion carries the advantage of computing devices being "best connected." They can operate with optimal performance and range.

The new standard is expected to appear in consumer electronics next year.

Wilocity, a developer of 60 GHz multi-gigabit wireless chipsets, which is on the WiGig Alliance board, has been talking about a first wave of products for consumers, including a Dell Ultrabook, and tri-band reference product.

Wilocity and Dell announced a WiGig-enabled product, and the company has technology partnerships with Marvell and Qualcomm Atheros.

QualComm and Wilocity launched their tri-band reference design that combines 802.11ac and 802.11ad wireless capabilities on a single

module at CES 2013. Such modules will grant devices simultaneous access to 2.4-5GHz and 60GHz bands. Wilocity and Qualcomm Atheros' Tri-band system allows Ultrabook users to connect to peripherals such as docks, displays and storage at multi-gigabit speeds, while maintaining standard Wi-Fi coverage throughout the enterprise.

As for the Wilocity and Marvell partnership, Marvell chose Wilocity in order to accelerate Marvell's deployment of WiGig-compliant wireless platforms for computing, networking infrastructure and consumer electronics.

"IEEE 802.11 is undergoing a continuous process of refinement and innovation to address the evolving needs of the marketplace, and there is no better proof of that fact than IEEE 802.11ad," said Bruce Kraemer, chair of the IEEE 802.11 Wireless LAN Working Group. "By migrating up to the next ISM band (60 GHz), we break ground on new spectrum for IEEE 802.11, enable an order of magnitude improvement in performance and enable usages that have never before been possible with existing IEEE 802.11—namely wireless docking and streaming video."

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