

## IEEE Ratifies 802.11n to Begin New Era of High-Speed WLANs

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The ratification of the IEEE 802.11n-2009 amendment standardizes a tenfold increase in wireless LAN throughput while providing robust access-layer communication for data, voice and video applications.

## NEWS ANALYSIS

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### Event

On 11 September 2009, the IEEE 802.11n working group ratified the long-standing 802.11n draft standard without any changes. The effort, which involved more than 400 individuals from many different organizations and took seven years to complete, provides a more robust communication link and increases the potential data rate to 600 Mbps.

### Analysis

The IEEE's ratification of this standard comes after seven years of consideration and is more of a footnote than anything else. Most vendors have been shipping products based on the draft 2.0 version of 802.11n amendment. Because the IEEE took so long to ratify the standard, the Wi-Fi Alliance's certification of draft standard products and its testing for interoperability has become the important standard for wireless local-area network (WLAN) infrastructure.

Still, Gartner believes that the final ratification of the amendment will increase the momentum of WLANs as the default access layer connectivity. Users that have been waiting for the ratification can now deploy 802.11n-2009 solutions to move ahead with applications that need the additional throughput capacity for data, voice and video. The amendment also provides backward compatibility for 2.4GHz 802.11b/g and 5GHz 802.11a. We believe that the high speeds and increased density made possible by the new standard will be an enabler for enterprises looking to move to all wireless for voice and data in branch offices, satellites and even some headquarters. Enterprises that have already deployed enterprise-grade draft 2.0 802.11n solutions are protected by vendors that subscribe to the Wi-Fi Alliance certification, which makes backward compatibility to draft 2.0 part of its testing procedures.

With the official ratification, Gartner believes that prices for one- and two-radio access points will fall below current pricing of their 802.11g counterparts and the final barriers to 802.11n adoption will be removed. With the finalization of the standard, many vendors will start to push 802.11n products for all home and branch office solutions.

### RECOMMENDATIONS

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- **Enterprises that have enterprise-grade draft 2.0 802.11n components:** Continue to make sure that firmware updates will be supplied under warranty and that new components are Wi-Fi Alliance-certified to ensure backward compatibility until standard products are widely distributed.
- **Enterprises waiting for the 802.11n standard ratification to install a WLAN or upgrade an existing WLAN:** Move ahead, especially since we expect list prices to fall by between 20% and 30% over the next six months.
- **Enterprises that have 802.11a WLANs:** Make sure that your vendor's components have the latest Wi-Fi certification to ensure compatibility or migrate to a 5-GHz 802.11n infrastructure.
- **Enterprises that have deployed "prosumer" 802.11n infrastructure to small- and home-office locations:** Plan to replace any access points that cannot be brought up to enterprise-grade security and management requirements.

## RECOMMENDED READING

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- "Eliminating the Headache of WLAN Client Migration" — Enterprises need to know the issues associated with 802.11a/b/g backward compatibility as they affect new 802.11n WLANs. **By Timothy Zimmerman**
- "Magic Quadrant for Wireless LAN Infrastructure" — With the higher speeds of 802.11n and increased focus on voice, WLANs are becoming the access layer technology of choice for new enterprise network deployments. **By Michael King and Timothy Zimmerman**

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