

## Draft 802.11n Could Cause Confusion Among Wi-Fi Users

Ken Dulaney, Stanley Bruederle, Rachna Ahlawat

Several Wi-Fi chip vendors are basing their marketing on the Enhanced Wireless Consortium's (EWC's) proposed 802.11n standard. But the standard is far from final, and most enterprises should avoid adopting early releases.

## NEWS ANALYSIS

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### Event

- On 19 January 2006, the Institute of Electrical and Electronics Engineers (IEEE) voted to accept the proposed next-generation 802.11n Wi-Fi standard developed by the EWC. The proposed 802.11n standard will enable higher performance in wireless local-area networks (WLANs) with a wider range than current Wi-Fi technologies.
- On 20 January 2006, two U.S. Wi-Fi chip manufacturers, Broadcom and Marvell, announced that they are committed to producing "draft-compliant" chipsets.

### Analysis

The EWC was formed in 2005 to attempt to speed up progress on the 802.11n Wi-Fi standard, which had reached a stalemate within the IEEE's 802.11n committee. The EWC's work was backed by well-known vendors and the group appeared to threaten to work outside the standard, if necessary. Ultimately, however, the EWC proposal was adopted as the basis for 802.11n, which is likely to become the standard for the next generation of WLAN technology, supporting speeds as high as 600 Mbps. The standard will operate at both the 2.4GHz and 5GHz bands and will support compatibility with the current 802.11a/b/g standards.

More discussion is likely to occur before the 802.11n specification is ratified, which could lead to further changes, and interoperability testing by the Wi-Fi Alliance is still required. This process could take another year; thus, the outcome remains uncertain. Nevertheless, chip vendors have been quick to support the standard, whose adoption could enable them to raise prices on WLAN products to cover the costs of modification. Already, Broadcom and Marvell have made statements regarding their products' compliance with the 802.11n specification. Gartner believes that such claims may be misleading to customers, in part because they are premature, since the specification is likely to undergo changes over the next year. Also, customers may mistakenly infer that these chips can be made compliant through upgrades. In the past, with 802.11g, a similar rush to marketing occurred and included promises regarding the ability to upgrade that were not met.

### Recommendations

- **Enterprises:** Don't purchase a product based solely on its claims regarding 802.11n draft compliance. Maturity is still a year away. Enterprises' slowness to adopt other technologies, such as 802.11a — which provides up to 54 Mbps performance at 5GHz with up to 24 channels, depending on geographic location — indicates that enhancing performance is not an immediate priority for many companies. Plan to stay with Wi-Fi-certified products under the 802.11a/b/g banner. Expect these technology investments to be good for at least four more years. In 2007, Gartner could potentially recommend adding 802.11n compliance to requirements if the standard is ratified and the Wi-Fi Alliance certifies the products.
- **System Manufacturers:** Make it clear to customers that the technology may change before the specification is finalized, and that systems may not achieve the full 802.11n performance (with certified 802.11n products) when the final specification is released.

**Analytical Sources:** Ken Dulaney, Stanley Bruederle and Rachna Ahlawat, Gartner Research

### Recommended Reading and Related Research

- "Business Travelers Have Mixed Feelings About Wi-Fi Hotspots" — A survey of business travelers in the U.S. and the U.K. reveals that they use Wi-Fi hotspots relatively little, and barriers to more extensive use remain. **By Delia MacMillan and Ian Keene**
- "WPA, WPA2 and 802.11i Don't Meet Interoperability Needs" — The Wi-Fi Alliance must change its approach to wireless LAN security certification to focus on enterprises' interoperability needs, rather than on vendors' ease of certification. **By John Girard, John Pescatore and Ken Dulaney**

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## REGIONAL HEADQUARTERS

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### Corporate Headquarters

56 Top Gallant Road  
Stamford, CT 06902-7700  
U.S.A.  
+1 203 964 0096

### European Headquarters

Tamesis  
The Glanty  
Egham  
Surrey, TW20 9AW  
UNITED KINGDOM  
+44 1784 431611

### Asia/Pacific Headquarters

Gartner Australasia Pty. Ltd.  
Level 9, 141 Walker Street  
North Sydney  
New South Wales 2060  
AUSTRALIA  
+61 2 9459 4600

### Japan Headquarters

Gartner Japan Ltd.  
Aobadai Hills, 6F  
7-7, Aobadai, 4-chome  
Meguro-ku, Tokyo 153-0042  
JAPAN  
+81 3 3481 3670

### Latin America Headquarters

Gartner do Brazil  
Av. das Nações Unidas, 12551  
9º andar—World Trade Center  
04578-903—São Paulo SP  
BRAZIL  
+55 11 3443 1509