



Search Microsoft.com for:

Go

Sign Out<sub>net</sub>



## Market Analysis

### Wi-Fi Fortunes to Rise with Notebook PCs

By Lauren Gibbons Paul  
February 2004

- E-mail this Article
- Print this Article
- Letter to the Editors

The use of home and business wireless LAN (WLAN) technology based on the 802.11 (Wi-Fi) protocol is rising exponentially, fueled by the current generation of reasonably priced, richly featured notebook computers. According to recent research from Strategy Analytics Inc., computer vendors including Microsoft Corp. and Intel Corp. have done a stellar job **diffusing Wi-Fi technology and awareness** into the marketplace. That groundwork will pay dividends over the next few years.

"Wireless LAN products are **flooding the market**. Going forward, it will be pretty hard not to buy a laptop with Wi-Fi capabilities," says Cliff Raskind, director, wireless enterprise strategies, Strategy Analytics Inc., a market research firm in Newton, Mass. In 2003, nearly one-quarter of notebooks contained integrated WLAN capabilities. This year, that number will jump significantly to nearly 50%.

By 2008, 90% of all new notebook computers shipped worldwide -- or 62 million units -- will have WLAN capability, according to Strategy Analytics. Consumers are embracing lower end notebooks, which are priced right and save space, while a majority of professionals will be mobile in the coming years. These powerful forces are **driving the Wi-Fi bandwagon**.

"In the mature economies such as North America and Western Europe, the **notebook will be the computing platform of choice** for the professional. Those notebooks will be Wi-Fi-enabled," says Raskind, author of "Enterprise Device Outlook: Wi-Fi Captures the Surging Notebook Segment," a September 2003 report. By 2008, three-quarters of all business users will be mobile, spending time away from their desks, both on and off work premises. These ultra-collaborative professionals will take a flexible approach to meeting and working.

Dominated by Cisco Systems Inc., the **worldwide WLAN equipment market reached only \$2 billion** in 2003, but that number will grow rapidly along with the widespread Wi-Fi adoption beginning this year. (Strategy Analytics did not specifically forecast this market.)

#### Wireless Notebook PCs Take Charge

Global installed base of WLAN-enabled notebook computers

Year	Units Shipped
2003	12 million
2008	141 million

Source: Strategy Analytics

Raskind is **less than enthusiastic about the public hot-spot market**, which he forecasts will reach only \$2 billion in service revenues by 2007. Physical hotspot growth will far outstrip hotspot service revenue growth over the next few years. "We don't think there is much of a standalone business model for public WLANs. They will become part of a wider umbrella of services," he says.

Most public WLAN service providers **have staked their own heady forecasts** on extremely high levels of usage predicated on wireless devices having a street price of \$200. Given that the current price of Wi-Fi-enabled laptops is around \$1,000, it seems unlikely that device prices will drop to that level any time soon. Raskind does not believe users of less-expensive Wi-Fi devices, such as PDAs, will utilize the public WLAN services enough to take up the slack.

### Business Wi-Fi Use: Another View

While Strategy Analytics analyst Raskind is bullish on the eventuality of WLAN use in businesses, International Data Corp. analyst David Senf has a somewhat different take. "We're seeing **somewhat slower than anticipated adoption** of wireless LAN technology within the

#### Wi-Fi Hotspots Help Job Performance

Survey of 100 business travelers (published January, 2004)

enterprise. Organizations still want to keep non-discretionary costs down. They don't want to invest the resources in managing wireless equipment and training users," says Senf, manager of the IT/business enablement solutions group for IDC in Toronto.

Organizations are carefully weighing whether they should include Wi-Fi within their networking and mobile strategy. Wi-Fi infrastructure investments are not always easy to cost-justify and security concerns remain. "The real **need for wireless is not entirely evident**, especially in carpeted facilities where employees are not that mobile," he says.

In **vertical markets such as manufacturing or retail** where employees need to cover a lot more ground, the business case for wireless is more clear-cut. Companies in those sectors are likely to have Wi-Fi strategies already firmly in place. In retail, for example, customers could potentially check themselves out without having to stop at a cash register, via a combined Radio Frequency Identification (RFID) and wireless solution. "There is a lot of potential to integrate technologies like RFID, 3G cellular and Wi-Fi," says Senf.

Benefit Level Cited	Have used high-speed access when traveling (n=40)	Have not used high-speed access when traveling (n=60)
Beneficial, helps me do my job better	47.5%	21%
Extremely beneficial, provides significant business advantage	29%	11.2%
Of some benefit, but not relevant to job performance	19.6%	45.2%
Little or no benefit	3.9%	22.6%

Source: IDC

For their part, professionals believe **accessing e-mail and the Internet via public hotspots** while traveling is of tremendous benefit, according to IDC research. Business travelers who have used public hotspots in the past are even more convinced of the utility of hotspots than those who have not yet tried them. It falls to business managers to determine if this subjective rating of value is enough to make a solid business case for hotspot usage.

### Worldwide View

Tracking with the overall PC/notebook market, North America will see the strongest growth in WLAN notebook PC sales in both business and consumer segments through 2007. Western Europe and Asia/Pacific will embrace wireless notebooks at approximately the same clip, with Asia/Pacific taking a slight lead by 2007. **Japan and Korea will be the top adopters** of WLAN notebooks in the Asia/Pacific region as consumers there have a strong demand for broadband wireless Internet access, according to Raskind.

Computer OEMs wanting a piece of Wi-Fi's worldwide growth over the next few years must ensure their solutions are compatible with as many different versions of the protocol as possible, says Chris Ambrosio, director of the wireless device service for Strategy Analytics. For example, dual-band and tri-mode equipment, which supports the three current versions (802.11g, 802.11b and 802.11a), should be considered *de rigueur* in all current designs.

### Wireless Notebook Sales by Region

Global unit shipments in millions

Region	2003	2005	2007
Total	8.4	35.3	54.2
North America	4.1	14.3	20.7
Western Europe	2.0	9.4	13.7
Asia/Pacific/Japan	2.0	9.1	15.5
Rest of World	0.3	2.5	4.3
<b>Total</b>	<b>8.4</b>	<b>35.3</b>	<b>54.2</b>

Source: Strategy Analytics

"Businesses and consumers want to maximize their investments. They don't want to constantly have to buy the next new generation," says Ambrosio. That does not necessarily mean OEMs should invest today in Wi-Max (802.16e), the emerging wide-area wireless broadband version of Wi-Fi. "You don't want to race ahead of what the suppliers are going to support. The major chip companies like Intel are looking into Wi-Max but we haven't seen any major announcements yet. Right now, 802.11b, .11g and .11a are widely supported."



Computer OEMs should also stay abreast of their suppliers' plans to make chipsets that are compatible with both Wi-Fi and cellular networks, transferring seamlessly between the two according to conditions, says Ambrosio.

For the foreseeable future, the fortunes of Wi-Fi and notebooks appear to be united the world over. And the future looks bright for both. Says Raskind: "There will be increasing dependency and usage as shipments of WLAN notebooks grow." Indeed, nearly all notebooks may transform into wireless


devices in the foreseeable future. 

---

### About Strategy Analytics Inc.

With over 30 years' consulting experience in technology businesses, Strategy Analytics Inc. is a leader in providing strategic and tactical support for business planners around the world. Strategy Analytics provides information and insights addressing the key planning issues facing competitors in communications, broadband consumer electronics, automotive electronics, telematics and enabling technologies markets. More information about the company is available at [www.strategyanalytics.com](http://www.strategyanalytics.com) . For further details on the report cited in this story, [click here](#) .

### About International Data Corp.

IDC is the premier global market intelligence and advisory firm in the information technology and telecommunications industries. It analyzes and predicts technology trends so that companies can make strategic, fact-based decisions on IT purchases and business strategy. For more information, go to [www.idc.com](http://www.idc.com) .

### About the Author

Lauren Gibbons Paul has more than 15 years of experience as a writer and editor for leading business and technology publications, including *eWEEK*, *CIO*, *Managing Automation* and *Network World*. She has also done research assignments for a number of well-known analyst firms.

Have a question? Want more information? Contact the writers and editors at [oemedit@microsoft.com](mailto:oemedit@microsoft.com).

© 2004 Microsoft Corporation. All rights reserved. This document is for informational purposes only and subject to change without notice. MICROSOFT MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AS TO THE INFORMATION IN THIS DOCUMENT. The entire risk of the use or the results of the use of this document remains with the user.

Microsoft may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Microsoft, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

Last Updated: February 9, 2004

---

[Manage Your Profile](#) | [Contact Us](#) | [E-mail this Page](#) | [Newsletter](#) | [All Rights Reserved](#) | [Terms of Use](#) | [Feedback](#) | [Site Help](#)

©2004 Microsoft Corporation. All rights reserved. [Terms of Use](#) | [Privacy Statement](#)