

REAL WORLD CASE 3

UPS, Wells' Dairy, Novell, and GM: The Business Value and Challenges of Wi-Fi Networks

Wi-Fi is beaming its way into the corporate world. Its superfast wireless connections to the Web cost only a quarter as much as the gaggle of wires companies use today. And they're proving irresistible to businesses willing to venture onto the wireless edge. From General Motors to United Parcel Service, companies are using Wi-Fi for mission-critical jobs in factories, trucks, stores, and even hospitals.

What is Wi-Fi? It's a radio signal that beams Internet connections out 300 feet. Attach it to a broadband modem and any nearby computers equipped with Wi-Fi access cards can log on to the Net, whether they're in the cubicle across the hall, the apartment next door, or the hammock out back. To date, Wi-Fi has grown on the scruffy fringes of the networked world. It shares an unregulated radio spectrum with a motley crew of contraptions, including cordless phones and baby monitors.

The challenge facing the tech industry is to transform this unruly phenomenon into a global business. That involves transforming a riot of hit-or-miss hot spots into coherent, dependable networks. It means coming up with billing systems, roaming agreements, and technical standards—jobs the phone companies are busy tackling. The goal, says Anand Chandrasekher, vice president and general manager of the mobile-platforms group at Intel, is to “take Wi-Fi from a wireless rogue activity to an industrial-strength solution that corporations can bet on.”

Corporations aren't waiting for fine-tuned industrial versions of Wi-Fi to hit the market. The potential productivity gains are so compelling that many are investing in custom-built systems. United Parcel Service Inc. (www.ups.com) is equipping its worldwide distribution centers with wireless networks at a cost of \$120 million. The company says that as loaders and packers scan packages, the information zips instantly to the the UPS network, leading to a 35 percent productivity gain.

But let's go back to the Spring of 2000, when LeMars, Iowa, ice-cream maker Wells' Dairy (www.wellsdairy.com) rolled out Wi-Fi to 120 users in its new corporate annex. One thousand miles west in Provo, Utah, network software supplier Novell launched a wireless local area network (WLAN) in its IT department.

“This was very cutting edge when we did it, but it's just standard now,” says Jim Kirby, senior network architect at Wells', which churns out over 60 million gallons of Blue Bunny brand ice cream each year. Ditto for Novell, whose employees say they think about Wi-Fi only at those rare times when it is not accessible. About 90 percent of the company's 6,000 employees can access the wireless network at any of Novell's 96 offices worldwide.

Thus Wi-Fi is no stranger to the business world, but up until now deployments have been mostly limited to schools,

stores, airports, hospitals, and warehouses. This year roughly 90 percent of the nation's public and private universities have WLANs, which account for over 80 percent of the \$1.6-billion-a-year business wireless LAN market.

Of course, there are downsides to Wi-Fi. Having everyone online during a meeting can be toxic to productivity. When there are laptops everywhere, culturally it can create a whole lot of problems,” says Novell CIO Debra Anderson. “We're finding the balance between Wi-Fi as an intrusion and as a powerful, productive tool.” To minimize disruptions and keep people focused, Novell and other companies now institute “no laptop” policies for important meetings.

Wi-Fi is also not for everyone. Deskbound employees in finance or customer service really have no compelling need for wireless. IT managers need to learn where it makes sense, which can be difficult when everyone is wailing for Wi-Fi. “There is enormous pressure on IT managers from upper management to add wireless technology because it's sexy,” says analyst Stan Schatt.

Take the Wells' Dairy plant floor, where quality-assurance technicians audit products every two hours. Supervisor Jan Wagner has asked for Wi-Fi, but Kirby doesn't think the cost justifies the benefit. Installing it in Wells' massive, two-story, 550,000-square-foot south plant would require many more access points than usual, as the production machines would generate a good deal of interference.

Also, it's clear that business adoption of Wi-Fi won't accelerate until security reaches industrial grade. Corporations are hankering for the power and flexibility of Wi-Fi networks, but many are postponing rollouts in strategic areas until they're convinced that hackers, spies, and competitors can't intercept wireless data. For example, General Motors has deployed Wi-Fi in 90 manufacturing plants but is holding off on Wi-Fi at its headquarters until next year. Why? Execs worry that until new encryption is in place, guests at a Marriott Hotel across the street could log on to GM's network and make off with vital memos and budgets.

Case Study Questions

1. What are the business benefits of Wi-Fi networks?
2. What are some of the problems faced by companies that are using Wi-Fi networks? What are some solutions to those problems?
3. What are some other business uses for Wi-Fi networks not mentioned in this case? What are their business benefits and challenges?

Source: Adapted from Mathew Boyle, “Wi-Fi USA,” *Fortune*, November 25, 2002, pp. 205–214; and Heather Green, “Wi-Fi Means Business,” *BusinessWeek*, April 28, 2003, pp. 86–92.