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PROTOTYPE

## Mobile Web: So Close Yet So Far

By MICHAEL FITZGERALD

ON the surface, the mobile Web is a happening place. There's the [iPhone](#) in all its glory. More than 30 companies have signed up for the Open Handset Alliance from [Google](#), which aims to bring the wide-open development environment of the Internet to mobile devices. [Nokia](#), which owns nearly 40 percent of the world market for cellphones, is snapping up Web technology companies and has made an eye-popping \$8.1 billion bid for [Navteq](#), a digital mapping service. There are also the requisite start-ups chasing the market.

It all looks good, but the wireless communications business smacks of a soap opera, with disaster lurking like your next dropped call.

In 2000, the wireless application protocol was supposed to bring the Internet to the cellphone. Our hero turned out to be a flash in the pan. That was attributed to a lack of high-speed cellular data networks, so a frenzied and costly effort to build third-generation, or 3G, networks ensued. But at a recent conference, 3G was called "a failure" by Caroline Gabriel, an analyst at Rethink Research. She said data would make up only 12 percent of average revenue per user in 2007, far below the expected 50 percent. (The 12 percent figure does not include text messaging, but you don't need a 3G network to send a text message.)

Similarly, surveys by Yankee Group, a Boston research firm, show that only 13 percent of cellphone users in North America use their phones to surf the Web more than once a month, while 70 percent of computer users view Web sites every day.

"The user experience has been a disaster," says Tony Davis, managing partner of Brightspark, a Toronto venture capital firm that has invested in two mobile Web companies.

While many phones have some form of Web access, most are hard to use — just finding a place to type in a Web address can be a challenge. And once you find it, most Web content doesn't look very good on cellphone screens.

Even the iPhone's browser can disappoint. It has a version of the [Apple](#) Safari browser that doesn't support Flash, a programming language widely used on Web sites, so users are limited in what they can see on the Web. And, you pay a lot to experience the pain of surfing the mobile Web. Lewis Ward, an analyst at the International Data Corporation, compares the mobile Web today to [AOL](#) before it went with flat-rate pricing in the early 1990s. Most people surf on a pay-per-kilobyte model, which encourages them to surf as fast as they can, he says.

The carriers, however, seem to be having a change of heart about the mobile Web. [AT&T](#) has allowed Apple unusual control over the network in the iPhone, and [Sprint](#) and T-Mobile have signed on to the Android development platform of the Open Handset Alliance.

Industry watchers think that having started, the mobile Web will inexorably open over the next five years, solving many current problems.

For instance, there's the challenge of finding things on the Web from a mobile phone. John SanGiovanni, founder and vice president for products and services at Zumobi (formerly ZenZui), which was spun out of [Microsoft](#) Research, says his company hopes to make it easier for phone users to find phone-ready versions of sites they want. On Dec. 14, it plans to introduce the beta, or test, version of its slick-looking software. It will include colorful "tiles" that phone users can "zoom" into and out of quickly as they move from site to site. (The tiles resemble the iPhone's widgets, or icons on a desktop computer.)

Zumobi hopes that cellphone users will adopt tiles as their entry point to the Web; the company offers a scrolling interface of 16 such tiles that provide information with mass appeal, but users can set their own preferences. Software developers will be able to build a tile — in fact, [Amazon.com](#) has 12 ready to go — and put it on Zumobi's platform. Tiles can carry ads as well, creating revenue potential for carriers and developers.

THE chairman of Zumobi's board is Tom Huseby, a longtime entrepreneur and investor in the mobile business and now managing partner at SeaPoint Ventures. Mr. Huseby says the mobile Web is going through a predictable cycle involving the development of handsets, networks and markets. Now it is in the last phase of innovation: figuring out how customers want to see the Web from their phones. He says the answer will be to give people what they want, when they want it.

"You got to have open systems, to allow the vast creativity of people to take place," he says. Zumobi, Android and other developments, he says, will help create such openness.

Other approaches to solving this problem include [Yahoo](#) Go, a mobile Internet product certified to display Web pages correctly on more than 300 handsets, and another from InfoGin, an Israeli company whose product automatically adapts Web pages to work on cellphones.

The plot has plenty of time to twist yet again. Nathan Eagle an [M.I.T.](#) researcher, is working on mobile phone programming in Kenya, where he's teaching computer science students how to build mobile Web applications that don't use a browser. Instead, they rely on voice commands and speech-to-text translation to surf the Web

"People talk about the mobile Web, and it's just assumed that it'll be a replica of the desktop experience," Mr. Eagle said. "But they're fundamentally different devices." He says he thinks that the basic Web experience for most of the world's three billion cellphones will never involve trying to thumb-type Web addresses or squint at e-mail messages. Instead, he says, it will be voice-driven. "People want to use their phone as a phone," he says.

For now, widespread use of the mobile Web remains both far off and inevitable.