

Digital makes a difference

New wireless systems cost less and offer better battery life, more features / **Simson L. Garfinkel**

IF YOU ARE IN THE MARKET for a cellular phone, take a close look at the new digital services springing up nationwide. The digital systems offer lower-cost service, dramatically better battery life, increased features, and improved security. And if you're a laptop user, the new phones will also give you more options for connecting to the Internet or your company's computer network.

My first introduction to the digital phones came two months ago, when I bought a pair of Sprint PCS phones. Sprint is building a nationwide all-digital network, and to make up for pretty spotty service Sprint is offering astonishingly low rates for people who sign up now. For example, Sprint's top-of-the-line plan offers a whopping 1,000 minutes of air time for roughly \$100 per month, with no US roaming fees.

"Sprint's buying its customers," one of the company's competitors told me with disdain. And indeed, I've had problems in Belmont, parts of Cambridge, and even downtown Boston. Sprint doesn't even offer digital service on Martha's Vineyard.

One way to solve the poor-coverage problem is to purchase a "dual-band" phone. These models are actually two phones in one: a fancy digital PCS phone based on Qualcomm's code division multiple

access (CDMA) technology and a conventional analog cellular phone. The phone automatically switches into "analog roam mode" when you leave a Sprint PCS coverage area. The disadvantage is price: Sprint charges a whopping 67 cents per minute of air time when the phone is in analog mode. And the phones are locked so that even if you have another cellular telephone account, you can't use it with your Sprint PCS phone.

Sprint's phones come with a few advanced features, such as built-in caller ID and an electronic log book that remembers the last 10 people who called. There's a little envelope that appears on the screen whenever there's a message waiting inside your voice mailbox that's bundled with Sprint's service.

If you are really into advanced features, and if you have a little more money to spend, my advice is to skip Sprint and look to Omnipoint, a new wireless provider that started doing business in Boston last month. Omnipoint's network is based on global system mobile, the wireless standard that's been dominant in Europe for nearly a decade. And according to Omnipoint, GSM has coverage in more than 1,200 US communities with a population over 20,000.

GSM's 10-year jump on CDMA makes a huge difference to the consumer. The GSM phones that Omnipoint offers are seventh-

or eighth-generation digital instruments. They are generally smaller and have better battery life than the CDMA equivalent.

My favorite GSM phone right now is the Ericsson 788. It has a cryptic user interface, but the sound quality is as good as from my home telephone.

For the laptop user, the biggest advantage of GSM is data. With a Xircom PCMCIA (\$379) modem and a special GSM adapter (\$140) you can plug your laptop directly into your GSM phone. In my testing, the GSM adapter delivered the promised 9600-baud speed, which is fast enough for reading e-mail and viewing text-only Web pages.

The Xircom system is promising, but it needs some work. Xircom bundled the wrong version of software in with the GSM adapter; I had to download the correct version from the Web site.

I had a hard time keeping a connection going for more than five minutes. And when the connection dropped, my laptop didn't notice. Apparently there is some problem with the cable that connects the phone to the laptop. Nevertheless, the connection was good enough to let me send this article to my editor from a coffee shop on Concord Avenue in Cambridge. You should also note that the Xircom modem is sold in Europe but not in the United States; a PC-card with a built-in GSM modem is available here.

Beyond data, Omnipoint has two-way paging built into all of its telephones. You can send e-mail from the Internet to any phone. Omnipoint's voice mail can receive either voice messages or faxes, which you can then send to another fax machine or display on a Nokia 9000 communicator, which is basically a palmtop computer

Omnipoint, a wireless provider that's new to Boston, bases its network on global system mobile.

with a built-in cell phone.

Sprint and the other digital wireless vendors should have these features within a year or so; Omnipoint has them now. The company has a 300-minute wireless plan for \$50 a month.

I'm going to keep testing these wireless wonders and write a full report in a month or so. And I could use your help. If you've had any experience with any of the new wireless telephone services, send an e-mail to digital-phones@simson.net. I'll summarize the best and forward the e-mail to the wireless providers as well.

SQL sequel

Last week's column on SQL database servers generated a storm of e-mail from readers who castigated me for passing over three great databases.

Before you pay \$200 for Mini SQL, take a look at MySQL (www.mysql.net), which has multithreading and somewhat better support from its author in Sweden. Postgresql (www.postgresql.org) implements more of the SQL languages, including transactions, has extensive documentation, and is free. If you are developing Web sites on a Mac or Windows machine, Filemaker Pro (www.claris.com) has some easy-to-use Web publishing features.

Along with the e-mail was a note from a Microsoft program manager, who said: "You are in a very small set of people building SQL apps 'for myself and my family.'" Maybe, but judging from the response, perhaps Microsoft should offer a free version of its SQL server for personal use. If Microsoft had a clue, it would bundle the technology into Windows 98.

Technology writer Simson L. Garfinkel can be reached at plugged-

