

Meg McGinity

# Flying Wireless, With a Net

*Mobile Internet providers prepare for takeoff.*

“**W**hat’s for din-na?” the cell phone-toting moviegoer barks into a platinum Nokia handset so loud the question can be overheard by fellow theater patrons. Mobile phone conversations have become so commonplace, we no longer bother to glare at the offender with an evil-eyed stare. Chances are we may be offenders ourselves.

The same is true of the Internet phenomenon. If your business card lacks an email address, you might as well be listing your phone number between two orange-juice cans.

So let’s face it: If you don’t have a mobile phone, you’re weird. And if you don’t use the Internet, you’re truly bizarre. Imagine when these two mediums, which have changed the way we work and play, cross paths? Those that aren’t surfing while walking will truly seem out of the communications-revolution loop.

The technology enabling wireless Internet services is developed and ready to go; the question is

do customers want or even need it? Few have even heard of the possibility of sending and receiving Web content over the airwaves or can imagine a use for it in their lives. Like so much of the cutting-edge, gee-whiz technology available, it almost seems like a

cure looking for a disease.

There’s little doubt service to providers will find a way to zero in on a killer app that makes consumer and business users think that wireless Internet services, like the cell phones that have displaced payphones and the email that has displaced snail mail, is the next must-have service they’d be crazy *not* to have.

There’s no doubt the numbers of cell phone users and Internet surfers are growing. There were

about 5.2 million people with cell phones almost a decade ago, according to the trade organization Cellular Telecommunications Industry Association (CTIA, Washington, DC). That number has increased more than 10 times, to about 70 million mobile phone

users as of 1998. From

1997 to 1998,

some 14 million people signed up for a cell phone, marking the biggest annual

increase in cell phone subscribership ever.

Soccer moms, high school students, and commuters have all made

the mobile phone a must-have accessory. Wireless services are expected to bring almost \$45 billion in revenue to the U.S. marketplace this year, according to the Telecommunications Industry Association. Pricing plans have continually made talking wirelessly cheaper. With bucket-of-minutes packages, some users are even unplugging their landline phone and trading it in for a mobile.

Just ask any teenager you come

## Staying Connected

across and you'll find America Online has done a pretty good job marketing the Internet to the masses. Some 18 million subscribers have an AOL address; two million call CompuServe, owned by AOL, home. According to Jupiter Communications, almost 35 million U.S. households will be connected online via one of five different service offerings in 1999. Makes you wonder how you ever got along without your Motorola StarTac or laptop modem.

Put together these two steam-roller trends and the wireless Inter-

Because this will be a packet-based communication, where information is chopped up and sent off in packets across the network, look for service providers to change the way they bill for such services. In other words, billing by the "bit" will become the norm for such mobile Net services, rather than the all-you-can-eat pricing plans that wireless service providers and some online service providers have popularized.

Since business is so good, why would wireless service providers want you to sign up for a wireless Internet service?

There's much, much more to come.

Something that started as a government mandate for wireless service providers to comply with might just prove to be a blockbuster service in the making. People are talking about location-based services that cater to a cell phone user's geographical location. For instance: You're stuck on a layover in New Orleans and need to find the nearest maker of the regional drink, The Hurricane. Instead of calling 411 and asking the operator for all the local taverns and bars, and being left even thirstier when the operator tells you that no request can be processed without knowing the name (of which you couldn't know), you turn on your wireless phone. You log on to a Web site and punch in a zip code. All the nearest bars and taverns in that area will pop up with phone numbers and addresses. You're drinking a Hurricane in no time. Killer app? Maybe.

In a few years, it's entirely possible that your mobile handset will be able to communicate messages to you depending on your location, without having to wait for you to ask for information. This could be enabled by what's known as emergency 911, or e-911. Wireless service providers have to comply with a Federal Communications Commission mandate to pinpoint a caller's location within 400 feet, so when the 911 distress number is called, public safety assistance points will know where to dispatch help.

With the capability to zero in on the geographical location of the user that supports e-911, wireless carriers will be looking

**Just like smiley politicians gaming for a state position want their photo taken in suburban schoolyards, technology runs after the soccer mom as the true test of a product's endorsement.**

net is coming to a soccer mom near you. (Just like smiley politicians gaming for a state position want their photo taken in suburban schoolyards, technology runs after the soccer mom as the true test of a product's endorsement.) Handheld mobile devices—personal digital assistants—like the PalmPilots, are becoming Web-enabled with new technologies and protocols, one known as wireless access protocol (WAP). Software companies called wireless portals are cropping up to help wireless service providers send Internet-based information to a wireless device. A new acronym is being born for wireless Internet service providers—WISPs.

Consider that worldwide e-commerce revenues are expected to hit \$717 billion by 2001, according to predictions by market watcher ActivMedia Inc. (Peterborough, NH). Buying on the Internet is a big deal. Why shouldn't purchasing products and services with your mobile phone be just as successful?

The key will be how much convenience such a service will bring to the customer. Yes, tapping into your email and getting spurts of information—like stock quotes and sports scores—periodically pushed out to the mobile phone have been around for a while now, but these vanilla services just haven't yet caught fire.

for a way to cover their costs of complying with the mandate. They'll be able to offer customers some value-added services atop the necessary network technology.

Imagine walking down a city street and getting a message on your cell phone that says "Hi Sam! You are only one block away from a Big & Cheesy's. Come in now and get a discount on large fries and a Jumbo Burger."

Another model being considered is having the customer detail what his or her interests are on a Web site—be it sports scores, stock quotes, or auction information from e-Bay, and have only that customized information sent to wireless phones when customers request it. Let's say you're waiting to bid on that genuine antique coin but don't want to sit at your desktop. You can receive a message on your phone indicating it's time to send your bid to e-Bay.

According to a recent poll by consulting firm the Strategis Group (Washington, DC), wireless phone customers said they would be willing to pay for some location-based services. Mentioned first as a beneficial service was roadside assistance, that lets a tow trucking company, for instance, be given the geographical area of the caller. So when your car breaks down in a desolate, unknown area, you can be easily located. The survey predicts subscribers will pay an average of \$8 per month for these value-added location services.

How much would you pay, say, if the location-based wireless Internet service was marketed as a way to keep track of your child's location at all times? What if you

were a high-level executive concerned about your security? This technology could help pinpoint your location secretly. In fact, some execs are paying for it now.

Location-based services offered by wireless Internet technology may be a gee-whiz, show-your-friends technology, but it may also have a dark side. It may trouble some mobile customers that should they sign on for such location-based wireless-Internet services, it would mean the carrier would be privy to their location—at all times. With customer profiling, messages tailored to a user's likes and dislikes may be too close for comfort for some. Imagine if you have a fondness for chocolate, to the point of obsession, and your provider learns about this and starts sending messages on all chocolate sales going on in the area. Or what if you don't want your boss to know that you're shopping while you said you were meeting with a client. Location-based services will know your whereabouts.

And just when we get dependent on this new technology, look for service providers, ever savvy, to find a way to reap revenues from the customer who wants to retain his privacy. Charge the subscriber a fee to turn off the technology on the mobile handset, so he or she can remain anonymous. Don't laugh, it worked on the ATM machines. (Never thought I'd be paying \$1.50 to take out my own money).

Now that sounds like a killer app. **C**

MEG MCGINITY (meg\_mcginity@zd.com) is a senior writer at *inter@ctive week*.

© 1999 ACM 0002-0782/99/1200 \$5.00

acm digital  
LIBRARY

# PLUG into the ultimate online resource

[www.acm.org/dl](http://www.acm.org/dl)

- Over 20 high-tech publications
- Up to 15 years of publication archives
- 9 years of conference proceedings
- 250,000 pages of text
- State-of-the-art search engine



Association  
for Computing Machinery  
The First Society in Computing