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Mapping a Wireless Trend

GPS standbys Garmin and TomTom may need to change course if the popularity of in-phone navigation systems from the likes of TeleNav continues to grow

by [Arik Hesseldahl](#)

Technology



Greg Hughes can't afford to get lost. Hughes, 40, is a computer security consultant who logged about 150,000 miles flying to clients last year, and he typically rents a car to get from place to place once he lands. To find his way around, Hughes used to rely on dashboard-mounted navigation devices. But lately, he has ditched standalone navigators in favor of the mapping tools embedded right in his BlackBerry ([RIM](#)). "It's more convenient to have everything built into a single device," says Hughes, who's based in Portland, Ore. "I can use it when I travel for work or for personal travel. It makes the BlackBerry a lot more useful."

And potentially less expensive. Hughes pays about \$10 a month for the service, provided by [TeleNav](#), which delivers turn-by-turn directions, on-screen maps, and other travel-related information directly to cell phones and BlackBerry devices via AT&T's ([T](#)) wireless network. That works out to \$240 over a two-year contract, which is less than the roughly \$350 he would pay for a basic in-car navigation device. "It's also one less gadget to keep track of," says Hughes.

That's music to the ears of TeleNav, based in Sunnyvale, Calif., and [Networks In Motion](#), based in Aliso Viejo, Calif., the two leading North American providers of navigation services over mobile phones. It's also a boon for wireless carriers including AT&T, Verizon Wireless, and

Sprint Nextel ([S](#)), which have spent billions of dollars to create networks capable of delivering advanced data services

What's In the Numbers?

Researchers at iSuppli estimate that of the 1.1 billion handsets sold this year, about 165 million, or 15%, will be able to run navigation services. That's up from 110 million navigation-ready cell phones sold last year. But if anyone's not rejoicing over the increased popularity of navigation via cell phones, it's probably companies such as Garmin ([GRMN](#)) and [TomTom](#), which have generated billions of dollars from sales of standalone personal navigation devices (PNDs) and the dashboard-mounted navigators Hughes used to use.

Networks In Motion supplies navigation services to Verizon Wireless, a joint venture of Verizon Communications ([VZ](#)) and Vodafone ([VOD](#)), as well as to Alltel, U.S. Cellular ([USM](#)), and others. Networks In Motion Chief Executive Doug Antone says it took 15 months on the market to sign up 1 million subscribers, and that three months later the company is close to breaking the 2 million mark. Besides AT&T, the largest U.S. mobile-phone operator, TeleNav's partners include Sprint, T-Mobile ([DT](#)), and Alltel ([AT](#)). TeleNav Chief Executive H. P. Jin says his subscriber tally is greater than 2 million, but he won't say by how much.

Those numbers can mean higher average monthly revenue for wireless carriers. David Gill, an analyst at [Telephia](#), says that of the \$200 million spent this year by consumers on wireless location-based services, such as those that help parents keep track of their kids, 87% will be spent on navigation. "When you take out games and ringtones, which don't generate any recurring revenue after they're purchased, navigation stacks up quite well," Gill says.

Verizon Wireless said data revenue rose 70% in the second quarter from a year earlier, contributing some \$1.8 billion to its total of \$10.8 billion in wireless revenues. A Verizon spokesperson said the company doesn't break out revenue by product, but characterized sales of the VZ Navigator service as "healthy." AT&T said in July its wireless data sales grew by nearly 67%, while Sprint said its data business grew 40% in its most recent quarter. Neither AT&T nor T-Mobile has attributed the growth to navigation, but Telephia's Gill says the popularity of navigation services has shown a sudden growth spurt in the last two to three quarters.

Navigating More Services

Expect to see more wireless navigation services in the coming months, analysts say. "They've found it's a sticky application," says TeleNav's Jin. "Everyone can understand the product because navigation is such a basic need. Once they try it, they're willing to pay for it."

Still, getting users to try phone-based navigation isn't a given. Networks In Motion's Antone says some carriers find that only 30% of their user base is aware they can download applications to their phone. "What we need is to make the app a little easier to discover," Antone says. "And I

think you'll see that happening in the next few months." To prime the pump, carriers will offer more free trials, Antone adds. When carriers offer customers a free trial of navigation services, more than 30% keep the service and pay for it, double what's normally seen for other applications. "They're used to seeing conversion rates in low teens, [so] that made them very happy," he says.

Sticking with the Original

Where does that leave Garmin? A spokesperson for Garmin, based in Olathe, Kan., says the company offers its own cellular navigation service, but adds that most consumers would rather stick to the larger screen sizes found on a PND or a dedicated device that tends to remain in the car. Indeed, Garmin, TomTom of the Netherlands, and peers such as [Magellan Navigation](#) will generate \$6.7 billion in sales this year, up from \$2.7 billion in 2005. Gains like that have led investors to propel Garmin's shares to \$106.77 on Sept. 13, from a split-adjusted \$8.84 five years ago. TomTom shares have surged to €52.25 on Sept. 13, from €19 in May, 2005. (Magellan, based in Santa Clara, Calif., is closely held.)

Still, prices on PNDs are coming down, and Morgan Stanley ([MS](#)) analyst Aaron Husock in a Sept. 5 research note said he sees a "potential risk" to Garmin's third-quarter unit sales. The Morgan Stanley note doesn't outline cell-phone-based navigation services as a threat.

That could change in coming months if folks like Hughes keep opting to read maps on their phones instead of PNDs and dashboard devices.

Check out the slide show for a roundup of [cell phones that offer navigation services](#).

[Hesseldahl](#) is a reporter for BusinessWeek.com.

GPS Mobile Phones

Lost? Just Ask Your Cell Phone

Here are some high-end mobile phones that are equipped and ready to provide GPS services right out of the box

By Arik Hesseldahl

Why bother spending \$300 to \$500 to buy a global positioning system (GPS) device for your car when you can just pull out your cell phone to get maps and directions? That's what millions of mobile-phone users are doing these days, and it's making big money for wireless carriers, while threatening the bottom line for the likes of Garmin ([GRMN](#)) and [TomTom](#)—companies that make standalone devices for GPS satellite navigation. Of course, using your phone for navigation depends a great deal on both your phone and your wireless provider. In this slide show, we highlight some high-end mobile phones that are equipped and ready to provide GPS services right out of the box. We left out phones that require a separate GPS receiver.

In general, using the navigation services on these handsets entails a monthly fee on top of your existing calling and wireless data plan. In most cases, these services are powered by [TeleNav](#) or [Networks in Motion](#), though the carriers often rebrand them under their own banners.



GPS Mobile Phones

Motorola RAZR

Available from Sprint ([S](#)), [Verizon Wireless](#)

One of the most popular phones of recent years, the RAZR from Motorola ([MOT](#)) comes with built-in GPS satellite capability through Sprint and Verizon Wireless. Though AT&T and T-Mobile also sell RAZRs, you must buy a GPS attachment to use them for navigation.



GPS Mobile Phones

BlackBerry 8800, 8830 Series

Available from AT&T ([T](#)), T-Mobile ([DT](#)), Sprint, Verizon Wireless

It used to be that if you wanted one of Research in Motion's ([RIMM](#)) BlackBerrys with on-board GPS capability, you had to get it from Nextel. The 8800 changed that, adding GPS support across the board, regardless of carrier, making the popular mobile e-mail device compatible with several navigation applications





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GPS Mobile Phones

Sanyo Katana

Available from Sprint

A stylish flip-phone from Japanese electronics giant Sanyo ([6764.T](#)), the Katana has a camera, supports Sprint's music store, and comes in a variety of colors. With GPS navigation thrown in, it's a pretty complete package.



GPS Mobile Phones

LG 9800 (the enV)

Available from Verizon Wireless

At first glance, it looks like a rather chunky candy-bar phone, but crack it open in the middle, and it looks more like a laptop shrunk down to pocket size. In addition to navigation, the [LG](#) handset also supports Verizon's V Cast music and video service.



GPS Mobile Phones

Motorola v325

Available from Verizon Wireless

It may look a little old-school, what with the slide-out antenna, but there's a lot crammed into this little package. The v325 was one of the first mobile phones to offer Verizon's VZ Navigator feature.



GPS Mobile Phones

LG 550

On the road and need to find a decent place to eat? You could lug around one of those AAA travel guide books. Or you could use your phone to search for a local barbecue joint within a two-mile drive that's worth writing home about—also using the AAA's information, only more up-to-date. Networks in Motion recently teamed up with AAA to make its travel guide information available on certain Sprint phones like this LG 550.





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