

Valley companies drumming up novel uses for GPS technology

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By Ty Young

It's been nearly seven years since the first geocachers, armed with global positioning system devices, started using satellite signals to traverse the world and play their hide-and-seek game. Combined with the Internet, other services -- LoJack, OnStar and MapQuest -- were spawned, adding a new layer to the GPS market.

Industry analysts now are looking at an emerging partnership between industries, one that could propel GPS applications into the homes of billions worldwide.

According to market research firm Gartner Inc., nearly 40 percent of all worldwide mobile devices, such as mobile telephones and personal digital assistants, will be equipped with GPS-tracking microchips by 2010.

In North America last year, 55 percent of mobile devices were equipped with GPS chips, or approximately 90 million. By 2010, sales of GPS-enabled mobile telephones in the region will reach nearly 90 percent of the market, or more than 178 million.

This has GPS software developers chomping at the bit to unveil the next big thing in mobile telephone applications.

Chandler-based Inilex recently leapt to the forefront of the GPS automotive device market when it unveiled the Kepler Advantage, a mobile asset location device that sends messages to users through e-mail and text messages.

Once the small GPS locator is installed in an automobile, the user, via a Web site, can create a series of "geo-fences" which, when entered, will instantly send a message to the user.

"Let's just say you have a teenager and you don't want him or her to enter a certain area of town. If they drive into one of the predetermined areas, you will receive a message instantly on your cell phone," said Scott Ferguson, Inilex chief executive.

In February, the company presented the Kepler Advantage at the 2007 DEMO conference in Palm Desert, Calif., joining 60 other technology-based companies in the exclusive product showcase. Kepler Advantage took home the "DEMOgod" award, one of six given out during the conference. It honors products that captivated the audience at the event.

Kepler Advantage users also can create a "quick-fence" around their vehicles with a simple keystroke from their mobile telephones, providing an anti-theft device perfect for mall parking lots or on-street parking, Ferguson said. If a thief steals a car and drives it out of the geo-fence perimeter surrounding the car, the user can call the police while the crime is in progress.

It's a combination of LoJack and OnStar," Ferguson said. "When you call the police, they consider it a crime in progress and will respond faster than if you get out and find your car missing."

New applications

Other Valley companies are doing new things with GPS technology.

Chandler-based Trimble Outdoors recently partnered with four cellular providers, including Sprint PCS, to carry the company's fitness program called AllSportGPS. After downloading the program onto the mobile device, users can record distance, time, speed and calories used when running, walking or biking.

The program tabulates records on a personal Web site for users and stores previous routes, elevation grades and speeds from previous workouts.

"You just push a button and it starts recording," said Rich Rudow, Trimble Outdoors managing director. "When you're done, you just push a button and look at how far you're gone and how many calories you've burnt."

Trimble Outdoors, a subsidiary of Trimble Navigation, also created the Geocache Navigator application for geocachers.

Geocaching is an outdoor sport that uses a GPS receiver to find a cache placed anywhere in the world. The cache usually is waterproof and contains a treasure.

In the past, players would have to get their coordinates from a Web site and then use a separate GPS device to locate the cache. With a mobile telephone equipped with the Internet and a GPS chip, geocachers have everything they need in the palm of their hand, Rudow said.

"You figure some of these GPS devices cost more than \$300, and cell phones cost around \$100, it's quite a savings," he said. "And having the Internet on the phone, you save time and money."

Trimble Outdoors plans to unveil GuideWorx GPS, a mobile telephone navigation program where users can type in addresses to find maps and directions.

Costs drop, interest rises

Allen Noguee, a researcher from Scottsdale-based market research firm In-Stat, said cellular telephone providers are finally seeing the potential of adding GPS to their devices.

Since 1999, when Congress passed The Wireless Communications and Public Safety Act, cellular phone providers have been slow to add location chips into their devices. The act requires that all mobile telephones have GPS or similar locating software to allow 911 operators to locate users.

"It's been a long process, but the providers are coming around now," Noguee said. "There is a lot of potential money in GPS applications in cell phones, and I think providers are just now realizing this."

According to Gartner, falling GPS chip costs will make mobile devices more attractive to providers. In the company's forecast research, a GPS chip will drop to \$2.50 apiece by the end of 2010, down from \$4.20 per unit today.

With that in mind, Gartner expects the worldwide GPS market to reach \$30 billion by 2008, a 9 percent increase from today's figures.

On the horizon are even more innovative products, such as Isaac Daniel's [Fele Footwear](#). The Miami-based company recently unveiled a shoe with a built-in GPS chip and BlueTooth technology. Like the Trimble Outdoors' product, the shoe measures calories burnt, speed and distance. And with the BlueTooth features, users can place phone calls from the shoe.