

OBJECT LESSON GLOBAL POSITIONING SYSTEMS

A military technology has spawned an entire new subculture of wandering hobbyists and neogeographers. Laura Penny reports on the exploding popularity of GPS units

Location, location, location ... literally

For centuries, people have fumbled with stars, compasses and sextants to figure out where they are. This ancient need may help to explain a relatively recent tech phenomenon – the sudden popularity of global positioning system units.

Last year, U.S. sales of GPS units shot up by 488 per cent, while in Canada “sales have increased significantly since automotive GPS units began hitting the streets a few years ago,” says Brad Timinski, president of GPS City in Calgary. “It is by far the biggest market segment of today’s GPS industry and shows no sign of slowing.”

The device is incredibly useful – GPS units have numerous practical applications for anyone who needs to know the exact latitude and longitude of either their location or destination with unprecedented accuracy. Mounted on the dashboard of your car, a GPS can save time, and gas, by plotting the most efficient route. If you’re in a strange city, it can help you figure out where to sleep and eat. You need never try to decipher the rambling directions of relatives and random passersby again. And out in the bush, it could save your life.

But the GPS unit is not just handy; it can also be fun. It has opened up a new world of exploration and social interaction to anyone who can afford the \$100-to-\$200 price tag for a basic model.

Many technologies, like calculators and spellcheckers, can make us lazier, encouraging innumeracy and illiteracy. But GPS devices seem to be having the opposite effect, inspiring users to become more geographically literate and sparking a new interest in reading and making maps. Your Nintendo Wii might get you off your couch, but a GPS unit can get you out the door and into the world.

Donald Cooke, author of *Fun With GPS*, has been working with the technology for decades and is delighted that it is becoming so popular. “This technology is so accessible that we are living in a golden age of mapping. Anything that moves around outdoors can be turned into a map.”

Mr. Cooke says you can use GPS devices to remember good fishing spots, or to track your speed on a ski run. “If you don’t go anywhere interesting, put it on your dog,” he adds.

GPS devices have been going mainstream thanks to their integration with other technologies, such as BlackBerrys and cellphones. Lower prices are also a factor – a few years ago, GPS units started in the thousands of dollars, Mr. Timinski says, but now, “for a mere couple hundred dollars, anyone can have real-time moving map data in the palm of their hand or on the dash of their car.”

Like the Internet, the GPS is a child of the U.S. Department of Defence. The first GPS satellite was launched in 1978. In 1983, Ronald Reagan, then president, announced that civilians could use the system once it was complete.

The 24 satellites that provide GPS co-ordinates were in orbit, and the system declared fully operational, in 1995. However, it took until 2000



A hand-held GPS device shows a section of a detailed map of downtown Vancouver. JOHN LEHMANN/THE GLOBE AND MAIL

before the military eliminated a security feature called “selective availability,” a distortion that made the information less accurate for civilians. Now, GPS units are up to 10 times more accurate, able to pinpoint locations within a few metres.

The technology has raised some concerns about a surveillance society. Civil-liberties advocates are worried about the potential privacy-eroding effects of GPS units, noting that records of where folks go and how fast they get there could be used – or abused – by nosy parents, creepy stalkers, aggressive marketers and unscrupulous law-enforcement agents.

Even higher powers have started deploying GPS devices: A church in Florida tricked out their nativity scene with GPS-equipped trackers so that it could keep tabs on its oft-swiped Baby Jesus.

However, fans of the new technology have combined GPS devices with the Internet to foster a crazy quilt of grassroots communities, devoted to pursuits such as geocaching and social mapping.

Using a website such as geocaching.com, for example, participants obtain the co-ordinates for a target location, enter them into a GPS device, then

go hunting for the “hidden treasure.” The cache might be a box of trinkets, written messages, or even a disposable camera, so finders take their own picture, which they can share online with other geocaching enthusiasts. According to geocaching.com, there are 513,240 active caches worldwide.

Social mappers make and share maps that tell people something about a place. On Platial.com, one of the leading neogeography websites, users have generated more than 5,000 custom maps, including maps of where they have been, called autobiogeographies, guides to good eats in various cities and theme maps such as Places from Music that are Real, Birding in Japan and Birthplaces of Guantanamo Detainees.

Platial calls itself the People’s Atlas. Chief executive officer Di-Ann Eisnor says, “The interesting thing about neogeography is that it fulfills a very simple human need. We have an innate desire to explore, to connect, to adventure, but there is a big hurdle for most people – it’s overwhelming.”

GPS devices, and user-friendly websites such as Platial and Google Maps, have removed that hurdle. GPS units collect raw data and Platial

and Google Maps make it easy to plug in those co-ordinates to create do-it-yourself cartography.

Ms. Eisnor notes that Google Maps users have created seven million maps. She thinks that neogeography is catching on because GPS units make it “easy to navigate the world according to your own interests based on seeing who and what are nearby ... anywhere,” she says. “That is amazing because it demystifies much of what we don’t know about the world and can lead to more free movement, better adventures and more connections with like-minded people.”

Robert Maher, a senior researcher at the Applied Geomatics Research Group of the Nova Scotia Community College, has also noticed a growing general interest in geography. “Suddenly, we have an army of closet geographers wandering the landscape collecting info. There’s a recognition that the public can own their own geography,” he says.

He and his assistant, Heather Stewart, have run workshops on using GPS devices for fruit growers, tourism operators and seniors interested in mapping out old graveyard sites.

Ms. Stewart thinks that this public interest is due, in part,

to environmentalism. “People are becoming greater stewards of the land,” she says. “Even large bureaucracies like Parks Canada and Environment Canada are promoting stewardship, putting volunteers out in the landscape to record what they see and where it is.”

Mr. Cooke agrees that the interest in GPS technology is linked to greater environmental awareness. He notes that several large companies, such as UPS and Sears, have their drivers use GPS units to plan more efficient routes and cut down on their fuel consumption. “There’s some real social value, in an era of worries about your carbon footprint, if you can get where you’re going efficiently,” he says.

Like the Internet, GPS is a curious example of a big military technology becoming a convenience and a way to connect with others. GPS is fostering a burgeoning community of hobbyists, unlike other devices that tend to insulate us from the outside world or mitigate the need for personal contact. The sophisticated technology of the GPS seems to have created a new way for people to engage with each other, share a sense of place and tell each other where to go, in the nicest possible way.

By Laura Penny is a Halifax writer.

Different devices

FOR YOUR CAR

The bestselling GPS devices, by far, are the ones for your car. After you enter your destination, they can provide street navigation and information on points of interest. They can also tell you how fast you’re going, and many newer models feature voice navigation, so you can keep your eyes on the road.

HAND-HELD

Popular with outdoorsy, geocaching types, they are designed for untamed areas and include information such as lake maps. Some, such as the Garmin GPSMAP 76 CSx, even float if you drop them in the water.

TRACKERS

Perhaps the most controversial type of GPS unit, trackers have been the object of a number of American court cases and squabbles about the erosion of civil liberties. Trackers such as the Trackstick register, store and transmit the location and movements of whatever they are attached to, whether that’s a suspect’s car or your child’s knapsack. Services such as Accu-Tracking allow people to use cell-phones as trackers, so you can keep real-time tabs on your target’s location and speed.

THE DASH EXPRESS

Most GPS units are simply receivers, like radios – you tune into the location you want and the GPS delivers data about how far you are from the target. The Dash Express, which was a buzz product at the recent Consumer Electronics Show in Las Vegas, features two-way connectivity. This means that your GPS can connect to the Internet and search for points of interest on the Web, rather than relying on the information programmed into the unit. The Dash Express also allows you to upload traffic data, which means other Dash users can access real-time information about locations and traffic flow.

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