

The  
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Cars that drive  
themselves

The rise and rise  
of the DNA chip

Can coal power  
really be clean?

# Technology Quarterly

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## The phone of the future

How your handset will evolve  
in the next decade

tion, such as school or a friend's house. Disney Mobile, a Disney-branded mobile service that relies on Sprint's network, also offers a tracking service.

Another location service is available from Nextel, a mobile operator that was taken over by Sprint in 2005. Nextel opened up some of its systems to enable other firms to build their own software and services on top of its GPS technology. One example is AccuTracking, a small company which offers a tracking service for \$6 a month and boasts that it is "ideal for vehicle tracking" or to keep "virtual eyes on kids". Some customers are also using the service to track their spouses, by hiding phones in their cars. "Mine is hidden under the hood, hot-wired to the battery—it works very well and it is easy to hook up continuous power," writes one customer on AccuTracking's message board, who is tracking her husband.

Less suspicious types in Silicon Valley recently used the AccuTracking service for an art project. They created wooden sculptures of local technology icons, such as Bill Hewlett and Dave Packard, the founders of Hewlett-Packard, and Robert Noyce, the co-founder of Intel, and outfitted them with GPS-capable mobile phones. The "hitchhikers" were then placed around America with messages on their backs asking people to help them reach a specific spot in Silicon Valley. Mario Wolczko, an engineer at Sun, wrote software that linked AccuTracking with Google Maps so that the figures' journeys could be followed on the web (see [www.ylem.org/Hitchhikers/](http://www.ylem.org/Hitchhikers/)).

Start-ups are working on everything from city-wide games of hide-and-seek to monitoring the locations of Alzheimer's patients. Services that monitor jogging routes, and work out distance travelled and calories consumed, might also prove popular. Ken Hyers, an analyst at ABI Research, predicts that tracking services could be worth \$2 billion a year in North America by 2011, up from about \$30m this year. But he concedes that such lofty figures have been bandied about for years. What has changed, however, is that the operators seem to be getting over their worries about privacy and liability and have started to roll out services.

As a result, mobile operators, handset-makers and start-ups could transform and expand a small, specialist market hitherto dominated by expensive, dedicated tracking systems. Delly Tamer, the boss of LetsTalk.com, an online mobile retailer, likens the coming GPS wave to the arrival of camera-phones a few years ago. Child-tracking is the obvious service to start with, he says, but is only the beginning. "I believe that GPS will be successful this time around, but that it will be driven by applications we haven't even thought of yet," he says. ■

## Roaming holiday

**Communications:** New gizmos that combine audio guides with satellite tracking let tourists explore cities at their own pace

WHEN Melissa Mahan and her husband visited The Netherlands, they felt imprisoned by their tour bus. It forced them to see the city according to a particular route and specific schedule—but going off on their own meant missing out on the information provided by the guide. On their return home to San Diego, California, they started a new company called Tour Coupes. Now, when tourists in San Diego rent one of their small, brightly coloured three-wheeled vehicles, they are treated to a narration over the stereo system about the places they pass, triggered by Global Positioning System (GPS) satellite technology.

This is just one example of how GPS is being used to provide new services to tourists. "What we really have here is a technology that allows people to forget about the technology," says Jim Carrier of IntelliTours, a GPS tourism firm which began offering a similar service over a year ago in Montgomery, Alabama. The city is packed with sites associated with two important chapters in American history, the civil war of the 1860s and the civil-rights movement a century later. Montgomery has a 120-year-old trolley system, called the Lightning Route, which circulates around the downtown area and is mainly used by tourists. On the Lightning Route trolleys, GPS-triggered audio clips point out historical hotspots.

Another GPS-tourism firm is GoCar Rentals, based in San Francisco. It provides open-air vehicles, using a scooter engine with a fibreglass frame, similar to those used by Tour Coupes. Customers must follow a prescribed route to hear the GPS-triggered information. This limits the scope for exploration, but Nathan Withrington, the firm's founder, says that people tend to visit the same few sites.

Other firms, such as CityShow in New York and GPS Tours Canada in Banff, Canada, offer hand-held GPS receivers that play audio clips for listening to while walking or driving. In South Africa, Europcar, a car-rental firm, offers a device called the Xplorer. As well as providing commentary on 2,000 points of interest, it can also warn drivers if they exceed the local speed limit.

If such services prove popular, the use of dedicated audio-guide devices could



give way to a different approach. A growing number of mobile phones have built-in GPS or can determine their locations using other technologies. Information for tourists delivered via phones could be updated in real time and could contain advertisements. "Location-based services", such as the ability to call up a list of nearby banks or pizzerias, have been talked about for years but have never taken off. But aiming such services at tourists makes sense—since people are more likely to want information when in an unfamiliar place. It could give mobile roaming a whole new meaning. ■

## Doughnut adjust your set

**Electronics:** As home-entertainment systems become more elaborate, so do their remote controls. How can they be made simpler?

HAVE you ever seen anything on television that made you shout or shake your fist in anger at the screen? Televisions are, of course, unable to respond to such reactions. But that could be about to change. Controlling your television and other home-entertainment devices using voice commands or gestures is starting to become possible thanks to a new generation of controllers.

Consider, for example, the controller that went on sale last month with Nintendo's Wii games console. In place of the usual (sometimes baffling) combination of buttons and joysticks, the Wii has a

