

100 Million Strong - Industry Eyes LBS Tipping Point

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By: [Alan Cameron](#)

GPS World

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The announcement in March that "more than 100 million handsets enabled by Qualcomm's gpsOne technology are in commercial use" raised a few eyebrows in the GPS community. That 100-million figure, if substantiated, would jump the total number of GPS receivers worldwide, both standalone and integrated, well above any other previously stated estimate. Educated guesswork constitutes the only way of arriving at a total market volume, as many privately held GPS manufacturers do not release production figures. The Qualcomm claim would make "the gpsOne solution the most widely deployed GPS technology," and the San Diego, California-based wireless communications company the largest GPS provider in the world.



More importantly for the industry as a whole, the presence of 100 million GPS-enabled mobile phones in the marketplace could finally prompt the long-stalled launch of location-based services (LBS). This could in turn firmly embed GPS in both consumer

and business daily processes as, truly, "the next utility" — and explode the marketplace. The March 14–16 Cellular Telephone Industry Association (CTIA) Wireless show in New Orleans, the stage chosen for Qualcomm's announcement, furnished several other indicators of LBS imminence.

NAVTEQ, a digital mapmaker from Chicago, Illinois, hosted its second Global LBS Challenge competition, encouraging application developers to craft new services to entice both wireless carriers and consumers to take the plunge. With co-sponsors Microsoft, Telcontar, SiRF Technology, and ESRI, NAVTEQ handed out six \$10,000 cash awards, a \$50,000 grand prize, and assorted technology licenses. The stimuli drew interest, with the number of entries up more than four-fold over last year's Challenge.

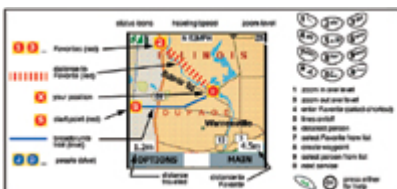
The Nextel-Sprint merger, announced December 15, 2004, and due to take effect in the second half of 2005 pending federal agency review, will bring together as one entity the two wireless carriers with the best LBS credentials. Reston, Virginia-based Nextel has heretofore focused on the business market, and included among its wireless offerings several navigation, location, and tracking services, over Java- and GPS-enabled phones from Motorola. Sprint, out of Overland Park, Kansas, was the first consumer-focused carrier to announce it would implement a handset-based assisted GPS solution to comply with the Federal Communications Commission E911 mandate. Although neither company made an LBS-related statement at CTIA, industry participants widely expect to see a large-scale consumer LBS offering from one or more carriers by Q4 2005.



Bones in Motion won NAVTEQ's Global LBS Challenge with an application that monitors time, speed, and calories burned during physical activity, and displays maps of both routes to be followed and routes accomplished.

At least one consortium of companies floated a concept that would work around rather than through the wireless carriers, whom some have characterized as conservative and slow to respond to location service opportunities. Digital mapmaker Tele Atlas, manufacturer Socket Communications, and service provider gate5 put forth their joint smart2go product, a GPS-driven bundle to navigation-enable personal digital assistants (PDAs) and smartphones. Consumers can buy the retail product and pay their wireless carrier for the air-time to download data, without having to wait for their carrier to implement an LBS offering of their own. The device incorporates a u-blox GPS chipset.

Handsets and Carriers Rob Roveta, senior director of product management for Qualcomm CDMA Technologies (QCT), the company's chipset division, stands by the 100 million figure, adding that the company actually counts conservatively, to ensure that it can meet investor requests for certification. He points out that these are not GPS receivers *per se*, but chipsets integrating GPS functionality along with other features such as modem, multimedia, and ringtone capabilities.



QCT is embedding GPS across its product line, for all air interfaces, GSM now as well as CDMA. Its chipsets have location-enabled 150 phone models from 20 manufacturers. Slightly more than 50 percent of these handsets are in the hands of North and South American consumers, with just under 50 percent in the Asia/Pacific market.

Whereabouts from Clarity Communications won in the personal security category, enabling parents to use their cell phones or the Internet to locate children or other family members, receive an alert when they arrive home, move inside or outside a predetermined area, or drive in excess of the speed limit.

Carriers have had success with LBS offerings, in Japan, where Roveta says KDDI used them to take away subscribers from rival carrier NTT DoCoMo, and in Korea, where they have generated millions of dollars in revenue. A recent launch by carrier Vivo in Brazil sold half a million GPS-enabled phones in the first three months. Roveta thinks the turning point for LBS worldwide services has arrived. "We're putting the technology in place for the applications." Qualcomm also offers its Location Server to wireless carriers through its partners Hewlett-Packard, NEC, and TCS.

"Impetus behind LBS applications work has been building for some time. The mistake early on was

that the marketing folks got ahead of themselves with the notion of one or two killer LBS apps that would justify the market. I think a set of smaller, more targeted niche apps will get the market going." He points to Nextel's success with a bundle of small applications in its enterprise offering.

"We are now working more closely with LBS application providers to bring more targeted and more specific applications to the North American and European markets." Qualcomm's Internet Services division has also made LBS a priority, with its QPoint product line for operators interested in offering location-based services, and its binary runtime environment for wireless (BREW), a platform that affords developers easy access to different chip features — audio, video, graphics, and GPS.

Global LBS Challenge NAVTEQ and its partners have meanwhile also encouraged developers to craft location-based applications. "If it's mobile, it's going to be location-aware. No doubt about it," asserts George Filley, vice president and general manager of NAVTEQ's Consumer Business Unit. "It's a completely horizontal market, not vertical at all. Don't throw them content, throw them an ecosystem" — meaning an environment of varied LBS applications. "This is not a well-defined niche market." However, the grand winner in the LBS Challenge at CTIA, and category winner for asset tracking/field services, exemplifies the targeted niche market appeal cited by Roveta as key to LBS success.

Bones in Motion monitors and measures physical activity in fitness programs. It records time, distance, speed, location, and calories burned while engaging in outdoor activities. Users can view activity summary, maps (street/topographical/satellite), and speed/elevation charts on their GPS-enabled phones, upload results to a personal online journal, and download maps of routes where other users have run, cycled, or walked — for example, when visiting a new city.

Bones in Motion received \$60,000 in cash and \$175,000 worth of NAVTEQ map licenses. Other category winners, who garnered \$10,000 cash and \$75,000 worth of map licenses each:

- in personal security, Clarity Communication Systems Inc. for Whereabouts, a child/teen tracking service for parents;
- in peer-to-peer/find me, LOC-AID Technologies for helping users locate friends, children, family members, or nearby points of interest, and to share their own location with designated peers;
- in navigation/POI look-up/traffic, InfoGation Corporation for Adeona, giving real-time traffic, weather and gas-price information, and nearby points of interest;
- in commerce/advertising/buying/billing, Smarter Agent, acquiring user location from the phone and delivering data such as sale prices, comps, taxes, and houses for sale and recently sold in the vicinity;
- in gaming/location-based imaging, Networks In Motion, Inc. for PhotoFinder, enabling users to manage photos containing location tags, view them on a map, and send to another phone or website with navigation to the spot where the picture was taken.

Show the Money Will the consumer pay to play? That's the key point still to prove out. Rob Consolazio, senior director of wireless data services for Nextel, had one marketing suggestion. "Don't call it 'LBS' — the consumer doesn't get that." His candidate? A better known concept in the marketplace: 'GPS' gets you a little closer."