Is iPhone Wi-Fi Location Better than GPS? Yes or No

Contributed by IMS Research
Thursday, 17 January 2008

18 January 2008Â
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This week, Steve Jobs announced that the iPhone will feature Skyhook Wirelessâ€™ Wi-Fi location technology in a joint development with Google. It is easy to write this off as a stop gap solution for GPS, but for me, this is a first step towards the next generation of cellular location technology.

In IMS Researchâ€™s report package, â€œWorldwide Market for GPS in Cellularâ€•, a focused report is provided on the major complementary/competitive location solutions to GPS, for cellular implementation. This covers a number of technologies, including WiFi, Bluetooth, WiMAX, UWB, U-TDOA and TV signals, outlining uptake over the forecast period.

Patrick Connolly, Senior Research Analyst, said, â€œWhile GPS is a more accurate technology, when you start moving into inner city urban canyons and indoors, just getting a fix with GPS becomes the issue, not accuracy, as anyone with autonomous GPS will reluctantly admit. GPS fundamentally struggles in these environments, as it was not initially designed for this use case. This isnâ€™t a major problem for sat-nav applications, but as LBS develops, it limits services and deteriorates the user experience.

Well implemented Wi-Fi offers the best of both worlds in this environment. Provided there are enough Wi-Fi access points in range, this will not only give you a fix, but comparable accuracy too, at sub 50m. However, it is not all conquering, as WiFi access points are required. This largely limits the technology to urban areas, where Skyhook has a database of access points in place, hence the Google partnership.

This brings me to the title. Really it is a trick question as the answer is C, both. But what is really interesting about this, and other alternative location technologies, is that it is neither a stop gap measure nor competitive to GPS in the long term. Wi-Fi location can be combined with GPS to offer high accuracy in all environments, and in some case enhance GPS performance outdoors. I can think of one or two GPS/Wi-Fi enabled handsets that are already positioned to benefit from such a technology. IMS Research expects a minimum of one other handset vendor to launch a GPS/Wi-Fi hybrid solution before the end of the year.

Skyhook is very well positioned to benefit, having already established a large access point database and partnerships with the likes of SiRF, Navteq and Intel. However, it is not the only company developing this technology. One of its biggest competitors is Mexens Technologyâ€™s Navizon. This is based on a similar concept, however, the Wi-Fi database is user generated, offering rewards to end-users to map access points. There are already 310,000 users signed up to this service, some of which are iPhone users!

Looking beyond Wi-Fi, there are a number of other compelling technologies out there, capable of solving this problem. IMS Researchâ€™s report compares these solutions under key parameters, outlining future uptake in cellular handsets. Looking longer term, as GPS handsets proliferate, mapping content grows and LBS moves to pedestrian navigation and urban-based services, these technologies will become a must for a robust user experience and more importantly, ARPU.â€•

If you would like an interview with an expert in this area, please contact Alison Bogle, Marketing Manager, at Alison.Bogle@imsresearch-usa.com or +1 412-441-1888.

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