Augmented reality: not that real yet

Stephen H. Wildstrom

Why iPhone apps that act as a digital guidebook aren't quite ready for prime time.

While standing on the sidewalk in downtown Washington, I hold up my iPhone and slowly turn around, watching the camera image on the screen. As I rotate, a Washington Metro icon appears superimposed on the picture. Avoiding some curious stares, I follow the direction indicated by the icon until I reach a subway entrance.

The application I have just described is an example of augmented reality. This long-awaited technology combines a smartphone's ability to take pictures, pinpoint your location, and search online to put information about what the camera sees right on the screen. There are just two problems: As it exists today—mainly in the form of iPhone apps—the technology doesn't work all that well. And the cool stuff it can do today is often a step down from just using conventional mapping and search applications. Someday I may be able to walk down a street, point my phone at a building, and get guidebook information on what I am seeing, but that day seems to be a ways off.

Consider Presselite Development Studio's 99¢ Washington Metro app, one of the better augmented reality programs I have tried. For most people, I predict, the novelty of having the subway entrance location superimposed on a picture will wear off pretty quickly. If you are far enough away from the station to need instructions, you're probably better off using an old-fashioned map that can show you the best way to the station—e.g., turn right at the next corner and walk two blocks—rather than trying to follow an icon on the screen. Fortunately, an un-augmented map option is built into this app. On the other hand, if you are close enough for an augmented reality app to point to a picture of the entrance, well…you could just look up and see it.

Pocket Universe from Craic Design ($2.99) is a different sort of augmented reality program. Point your iPhone camera at the night sky and the app gives you a star map of what you are seeing. I found it a bit hard to assess in Washington's extreme light pollution, which can make it hard to see the Big Dipper. While it wasn't accurate enough to find a specific star, the maps did give a good general idea of what you were looking at.

Smartphone GPS not accurate enough

Augmented reality uses three technologies that are, or soon will be, ubiquitous on smartphones: a camera to generate the image, a GPS receiver to determine your location, and the newest addition, a compass to sense the direction in which the phone is pointed. In theory, a service should be able to take your latitude, longitude, and orientation and tell you exactly what you are looking at.

Alas, the data aren't nearly accurate enough for that. The receivers in phones don't get close to the theoretical GPS accuracy limit of one meter or so. A GPS fix that puts you somewhere within a 20-meter circle is adequate for car navigation and most other location-based services. But it's not good enough to tell exactly what building you are in front of as you walk down the street.

There's an even bigger conceptual problem with augmented reality as it is used today by a variety of search apps such as the Layar Reality Browser, Wikitude World Browser, or Presselite's Bionic Eye. They do a great job of guiding you to the nearest McDonald's (MCD), but only if it is somewhere in your line of sight. If the target is on the next block behind the

building you're looking at, the information gets superimposed on the building in front of you, not the one to which you are being guided. Again, a conventional map is far more useful.

The technology will get better as the apps improve. Right now, you mainly see the warts. For example, Wikitude, a program that gives on-screen links to Wikipedia entries on objects around you, by default tries to show every point of interest within 100 miles. You can turn the range down to a mile, but even that produces a jumble of links in an attraction-filled place like D.C.

Augmented reality still feels like something that exists only because, technologically, it can. But behind the gimmickry, you see the possibility of mobile devices giving you real-time information on your immediate surroundings. With better location accuracy and some deeper thought given to the applications, "augmented" could live up to its meaning: something that adds to what we have.

WILDSTROM, Stephen H. Augmented reality: not that real yet. **BusinessWeek**, New York, Nov. 17th 2009. Disponível em: <www.businessweek.com>. Acesso em: 19 nov. 2009.