Now bike riders have their own smart-phone navigation systems

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Navigational systems that guide drivers from Point A to Point B, either with a GPS device or a smartphone, are now considered essential by many car drivers. So why not bike riders?

In fact, it's happening. Smartphones such as Apple's iPhone and newer Android handsets such as the HTC Droid Incredible can dispense bicycle-friendly directions to help cyclists navigate dedicated bike trails and streets with bike lanes, while avoiding hills and dangerous streets.

Bicycle advocates were thrilled in March when Google Maps began offering a "By Bicycle" option on the desktop version in addition to directions for driving, transit and walking.

"It's kind of like giving us equal play with those other modes of transportation," said Andrew Casteel, executive director of the Bay Area Bicycle Coalition, who uses an iPhone clipped to his handlebars to help navigate San Francisco and other Bay Area spots.

Several weeks ago, Google began offering bicycle directions on Android smartphones -- a quantum leap beyond having to look up directions on your PC and scribble them on a piece of paper before setting off on your trip.

Meanwhile, an iPhone app, OpenMaps, uses the extensive and nicely detailed open-source cartographic data from OpenStreetMap to deliver bike map directions to Apple's smartphone. The app is produced by a Romanian software developer, IZE, that uses route-finding technology from Menlo Park-based CloudMade. It has been downloaded more than 80,000 times since it debuted in July 2009, and it is particularly popular in Germany, where OpenStreetMap has some of its best map coverage.

As a two-wheeled commuter -- I regularly combine my bike with Caltrain and the Valley Transportation Authority to travel between San Jose and Palo Alto and points in between -- I've been keen to test out these smartphone services and decide whether it's time to throw away the paper map that has long been my bike-navigation bible.

The answer, in short, is not yet. While there is much to admire about the OpenMaps and Google Maps products -- and they are certain to get better as they collect feedback from users -- they are still not quite good enough to serve as an exclusive method of route-finding. You might think of them as a couple of teenage boys -- well-meaning, enthusiastic and smart, but capable of stunningly bad decisions.

Google, at least, is honest about this. Call up bike directions on your Android phone and the first thing you read is, "Bicycling directions (beta): use caution." This is sound advice. As I pedaled between Caltrain's Lawrence station in Sunnyvale and the Mercury News office in North San Jose in recent weeks, both Google and the OpenMaps app sent me like a moth toward the flames through the busy and dangerous intersection of Central Expressway and De La Cruz Boulevard near the airport.

To a computer algorithm, Central Expressway makes sense as a bike route -- it has designated bike lanes and is relatively straight. But it is not a pleasant cycling experience, and the cars roaring past at high speed a few feet away don't make it feel very safe, either.

A Google spokeswoman said the company has already heard from local cyclists about the Central Expressway problem and is working to alter its algorithms. But none of the routes the smartphone systems came up with was as good as the pastiche of shortcuts through parking lots and over pedestrian bridges that my commuting partner between Palo Alto and San Jose has discovered through several years of exploration.

Selecting a bike route "is a lot more of a personal question than a driving route," Casteel said. "You don't care in your car about hills or the traffic you'll experience unless it's going to slow you down. But on your bike, you care whether you are exposed to traffic."

Other times, the navigation systems would choose routes that were needlessly complex.

Consider this set of directions that Google dispensed on a recent trip through Mountain View: "Right on Mumford, go 282 feet; Left on Ely, go 269 feet; Right on Duncan Place, go 469 feet" "... you get the idea.

While the zigzag took me through a nice residential neighborhood with no traffic, I knew from experience and the dog-eared cycling map in my panniers that there was a more direct but quiet route just to the west, with a shaded bike bridge over the creek that separates Palo Alto and Mountain View.

Still, these smartphone navigation systems are valuable to cyclists, even in their current, imperfect states.

Geekarati who carry both Apple and Android phones might even consider using both platforms. OpenMaps and Google Maps sometimes provided very different -- but both good -- route choices.

For one trip from downtown San Jose northeast to the Mercury News, Google suggested a calm and scenic 5.8-mile route along the Guadalupe River Trail, while OpenMaps provided a brisk 4.1-mile beeline through Japantown, nine minutes faster than Google's route but also less relaxing.

I liked the map presentation in the OpenMaps app, which uses colors well and is so detailed that it shows bike paths through the Stanford campus.

But I was particularly impressed with Google Maps on the HTC Droid Incredible. Its 39-minute estimate for a 7.3-mile trip from the Mercury News to the Lawrence Caltrain station was accurate to the minute. But the best feature is the ability to call up an instant Street View image of an intersection on the phone's screen, a godsend when written directions are confusing.

The OpenMaps app does not yet have the same capability, although IZE is working on it, according to the company's CEO, Zsombor Szabo.

Google also allows you to simply tap in "Current Location" and your destination address to get a route. OpenMaps is more clunky, requiring you to place pins on the map for your start and end points before the app can compute the route between them.

Bike advocates say many Bay Area bikers are already using the smartphone tools, and they hope navigation systems will encourage more people to use their bikes just by showing them it's possible.

"As a bike advocate," Casteel said, "I think it's like the best advertising we can get for cycling."

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BIKE NAVIGATION APPS

For iPhone: OpenMaps offers both a free and a paid bike navigation app ($2.99) at the Apple App Store. The paid app includes more extensive tools such as batch downloads of map data to your mobile device. We used the free app on an iPhone 3G, with a paid navigation service (99 cents a month) from Menlo Park-based CloudMade. Google also hopes to bring bike navigation to the iPhone.

For Android phones (we used the HTC Droid Incredible): Requires the latest version of Google Maps, version 4.2 for Android, which can be downloaded for free in the Android Marketplace, and version 1.6 or newer of the Android operating system.