

Crowds create Wikipedia-style maps of the world

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In this March 15, 2012 photo, Ben Gleitzman uses a traffic and navigation app called Waze on his Apple iPhone as he drives to work in Menlo Park, Calif. Thousands of enthusiasts traveling the world using little more than GPS-equipped smartphones are helping Waze and other services to build in-depth maps of cities and countries around the world. Consumers, companies and even disaster relief organizations have come to rely on such “crowdsourced” maps and the ability to update them almost instantaneously. (AP Photo/Paul Sakuma)

When Benjamin Gleitzman moved from New York to the San Francisco Bay area, he used a talking turn-by-turn driving app to guide him across

the country. In the middle of Wyoming, the voice told him to turn left where there was no road.

Rather than complain to the maker of the app, called Waze, he logged in and made a note for anyone else who happened to drive that way that the road wasn't there. It was a small gesture of consideration to his fellow travelers.

But such niceties have started to add up. Taking a page from [Wikipedia](#), services like Waze have marshaled armies of unpaid contributors and their GPS-equipped smartphones to [map](#) wide swaths of the world from scratch. Consumers, companies and even disaster relief organizations have come to rely increasingly on such "crowdsourced" maps and their key advantage: When the landscape changes, so can the map.

"I can see that it gets incrementally better every day," said Gleitzman, a 25-year-old programmer, who these days depends on Waze to steer him around traffic during his commute, thanks to hundreds of users in and around San Francisco whose cars' speeds and locations are tracked automatically as they run the app.

Waze started in Tel Aviv in 2006 as an open-source [mapping project](#) called Freemap and today claims 14 million drivers around the world, including more than one million in Israel alone. Of those total users, the company says about 45,000 are dedicated map editors, while another 5,000 serve as regional managers to ensure the accuracy of the maps of their parts of the world.

In a video animation CEO Noam Bardin likes to show to highlight the power of the crowd, a blank screen is filled with colorful lines representing the highways and streets traveled by Waze users in Tel Aviv over 24 hours to create an intricately [detailed map](#) of the city.

"Our goal in life is to save you five minutes a day on your way to work," Bardin said. But the company believes the massive amount of geographic data its users generate can also do more. "It became very clear this is going to be the way to map the world."

OpenStreetMap is another effort founded on the same belief but more closely follows the nonprofit Wikipedia model. Like Wikipedia, the volunteer-written online encyclopedia, anyone can go to the OpenStreetMap website and add or edit information. And anyone can use the maps - to find their way or to build their own map-based apps - for free.

Conceived in the U.K. in the early 2000s by a lone British programmer, the service has since grown to a half-million registered mappers, including 16,000 heavily active contributors, according to the organization's wiki. Especially popular in Britain and Germany, OpenStreetMap is built by users who trace their travels on GPS units then connect the dots to draw highways, streets and hiking trails on digital maps. Volunteer trekkers worldwide have logged more than 2.7 billion such GPS points on the map so far.

Using OpenStreetMap can be as simple as going to the main website and searching for a location, as with the popular Google Maps. But the guts of OpenStreetMap are not maps at all but geographic data that anyone can use for free to build whatever maps they choose.

The price appears to be right for some companies. Popular location-based social networking service Foursquare switched to OpenStreetMap late last month to show its 15 million users where their friends are "checking in."

Days after Foursquare's announcement, as the tech world obsessed over the latest iPad, OpenStreetMap mappers began chattering online about

what they believe were their unique contributions showing up on maps in Apple's new iPhoto app.

"We're delighted to see another prominent map user make the switch," wrote OpenStreetMap volunteer Jonathan Bennett on the service's official blog, adding that he hopes that Apple soon will be crediting the service, as required under terms of its free use.

Apple declined to comment.

Bennett started using OpenStreetMap in 2006 as a way to keep track of his favorite uncharted mountain biking trails in the British countryside around his hometown of Guildford southwest of London. He has since mapped much of the region.

In recent crises, OpenStreetMap has served as more than a handy resource.

Along with the staggering loss of life, the earthquake that devastated Haiti in 2010 dramatically altered the country's geography, especially in the capital city of Port-Au-Prince. Buildings disappeared, refugee camps sprung up and streets ended in piles of rubble.

OpenStreetMap quickly became a go-to resource for disaster relief workers, who both relied on the map's real-time updates and contributed their own knowledge as they encountered changes in the city's terrain.

Whether mapping roads blocked by the Japan earthquake and tsunami or updating the location of new highways, stores or subway stations the day they open, Bennett said the responsiveness of crowdsourced maps to change represents a new way of charting the world: "OpenStreetMap can keep up with the pace of progress in a way that no other way of making maps can."

More information: Waze: <http://www.waze.com>
OpenStreetMap: <http://www.openstreetmap.org>

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