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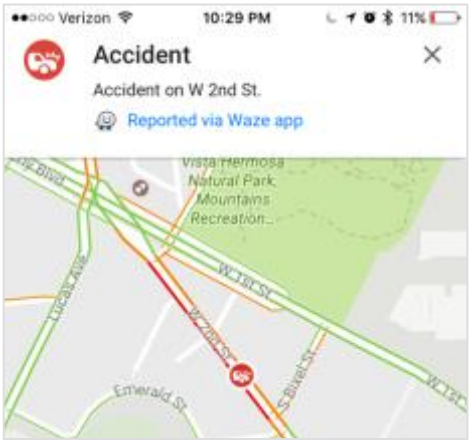
Tech Report: Waze Smartphone Navigation App

Waze is a smartphone navigation app that uses a combination of social and passively-collected data to help drivers “outsmart traffic, together.” While there are a few main competitors in the navigation space, Waze has risen to the top 3 because of its unique, community-driven, approach to guide traffic analysis.

Originally founded in 2006 by Ehud Shabtai as “FreeMap Israel”, the app was renamed to Waze in 2009. As Waze grew in popularity worldwide, several large tech firms in Silicon Valley took note due to its unique operating model and propensity for market disruption. Eventually Google parent company, Alphabet, bought Waze for $1.1 billion on April 11, 2013. (Bort)



Since the Alphabet acquisition, Waze has continued to operate independently and competitively. (Chemi) Waze’s traffic and incident data is integrated into Google Maps (pictured, at right), but while the two apps are similar, they are distinctly different. While Google Maps is more of a traditional mapping software that also offers navigation features (usually used for less known and common excursions), Waze’s primary purpose is to help drivers “outsmart traffic” and save time on (usually) more common, repetitive, predictable trips. (Klosowski)

Both Google Maps and Waze have developer APIs available, but despite Google Maps using the Waze traffic data in its own apps, community developers cannot access Waze traffic data directly using an API from either company. The Waze API is used primarily to link to Waze from other smartphone apps. With a very small code snippet (just 12 lines), a developer can automatically open the Waze app, directed to a desired destination, with no interaction cost to the user. Other companies, such as Lyft, a rideshare company, are starting to use this API to integrate with Waze ("Transportation Trailblazers Lyft and Waze Bring Even Faster Routes.")

The unique combination of how Waze collects its data is what sets it apart in the marketplace from the likes of Google and Apple. Like all top navigation providers, Waze passively, anonymously, and continuously collects timestamps and location data while the app is running. However, the active, social data Waze collects from drivers via its app enhances its traffic analysis and causes it stand out from the crowd.

First, Waze uses gamification techniques to encourage social engagement in the app, primarily through user levels. When a driver first creates an account, they start as a "Waze Baby". As the driver engages with the app and reports real-time conditions and other information, they can advance through other user levels, all the way to "Waze Royalty." These user levels provide another small nudge to urge participation.

Drivers can also report a variety of real-time map data in as little as 3 button taps. The app options (pictured at right) include: traffic jam, police sting, vehicle crash, road hazard, gas prices, map chat (share a photo), map

issue, place (exterior photo of a place), automated speed and/or red light cameras and road closures. The key is real-time. There is not a significant delay for any of those data points to be reported to an official source, such as a media outlet or government entity, to be processed, and then to be broadcast to the masses. As soon as the data points come in to the Waze app, Waze starts processing and adjusting the trips of everyone in the area.

Another valuable feature of the Waze app is its anticipation of user needs. Waze learns the driver's habits and automatically sets up commutes home and to work. When drivers integrate with an online calendar, Waze also offers an automatic feature for upcoming drives for the locations of calendar events.

Using the Waze app, users can set up an immediate trip or get a time estimate for a later drive time. Features utilizing social data are worked into the trip plan; Waze can route drivers to a gas station on the route and even display the current community-report gas prices. Trip plans can also be shared with anyone on the smartphone's contact list. When the plans are shared, selected contacts will be notified via text of the driver's estimated time of arrival.

The Waze app is a great example of how maps can be used to integrate data in useful, potentially market disruptive, ways. Instead of searching through multiple sources of difficult-to-access and frequently delayed data, Waze drivers get real-time updates that are immediately used to alter routes and save them time. The value in Waze is provided via a map interface in an app, but the unique value is in how it collects and uses data.

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