

Google patent supports driving away from potholes

26 August 2015, by Nancy Owano

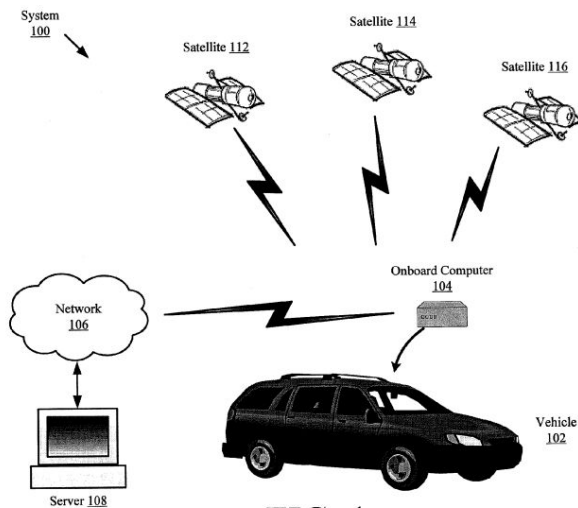


FIG. 1

Credit: United States Patent US9108640

A "Systems and Methods for Monitoring Road Quality" patent filed by Google was made known on August 18. The inventor listed is Dean Jackson. The filing was dated January 2012. The patent discusses systems and methods for monitoring sensors to report the quality of the roads via a communication device. Andrew Liszewski of *Gizmodo* translated: Google wants to use a car's GPS to detect potholes and then use the [information](#) to plot a more comfortable route to where you need to go.

Autoblog also explained how it works, saying "When a driver hits a pothole, the [navigation](#) system notes the location and sends the info into the cloud."

In one such implementation, said the patent document, a head unit may be the communication device. The unit controls the vehicle's stereo or radio system. The vehicle's road location may be determined by a GPS-enabled head unit or similar

device, together with mapping software.

Alternative devices, said the document, include mobile phone applications, PC applications and any others where vehicle-setting preferences may be automatically controlled based on the position and/or identity of the person in the vehicle.

Such a system, said *Gizmodo's* Liszewski, makes a lot of sense: "The vast majority of vehicles on the road already come with some sort of GPS-based [navigation system](#), and when connected to motion sensors mounted somewhere in the vehicle, the devices could be used to collect info on where the vehicle is being bounced around, which indicates the presence of a pothole." What is more, "as hundreds of vehicles report in, a fairly accurate map of the most pothole-riddled streets in a city could be accumulated, allowing Google Maps to provide a faster, and smoother, route to a destination."

The quality of the road is judged, said the patent document, by the amount of vertical vibration that is encountered. That data, together with the vehicle's location, may be transmitted through a mobile network to a central server for distribution in road quality reports and to improve driving directions in mapping software.

One can think of it, as did *Autoblog* on Tuesday, as a kind of pothole patrol. Associate Editor Chris Bruce referred to "a roving fleet of pothole reporters." Bruce pointed out that "Based on the amount of vibration on a given street, Google's servers can create a continuously upgrading database of the average road quality and can divert drivers around particularly bad sections when deciding on a [route](#)."

Remarked Eric Limer of *Popular Mechanics*: "I guess we'll still have to wait for the patent on cars that can *fill* potholes on the [go](#)."

More information: United States Patent
US9108640:
www.freepatentsonline.com/9108640.pdf

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