Calgary rolls out Bluetooth travel time system

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(Phys.org)—The City of Calgary, Alberta, now uses Bluetooth-based tracking to give people real-time information about travel time during their commute. The system collects information from Bluetooth devices and estimates travel times and congestion. The times are then displayed on electronic signs at key locations along the highway. The Bluetooth signals come from mobile phones, headsets, or built-in entertainment systems. The City activated what is called the Travel Time Information System along the Deerfoot Trail.

Bluetooth devices including GPS, cell phones, and other mobile devices have a unique ID code assigned to them. The City's detection system reads this code at various points along the route where the Bluetooth sensors are installed. The data is collected at a central server at the city traffic management center. The traffic monitoring system is an

estimated $400,000 outlay on a stretch of highway, the Deerfoot Trail.

Fifteen sensors and seven message boards are spaced along the route, where the Bluetooth device MAC addresses are put to use. As for privacy, the technology encrypts and monitors Bluetooth signals without tracking other information. There is a list of MAC addresses only. Plans are to expand the Travel Time Information System to include other areas as funding becomes available.

The detection system is programmed to filter out signals from vehicles drivers and pedestrians who are near Deerfoot Trail but not traveling on it. Special algorithms are used so that Bluetooth signals from pedestrians or other stray sources are ignored. The system can calculate a fairly accurate real-time estimate of drive times that are displayed on the overhead message boards. According to the city, the Bluetooth system was found to be consistently accurate during a trial in 2010, and is functioning well in the construction area on 16 Avenue North and Deerfoot Trail. The system becomes increasingly accurate as more people use [Bluetooth devices](link), noted the city web site.

Gord Elenko, manager of the Calgary roads traffic division, said, "Drivers will be able to make informed route planning choices in real time. We believe it will eventually help reduce congestion and decrease driver frustration."

A systems engineer said that they are one of the very first municipalities to implement this in Canada.

The system will operate from 6:30 a.m. to 6:30 p.m., Monday to Friday, and the city will further test and monitor it during peak travel times. Once the reliability of the system is assessed. a rollout of expanded hours of operation is planned too. In total, the city plans to have 26 permanent Bluetooth detection systems installed and 15 message boards showing the

travel times on major commuter routes.

More information: [www.calgary.ca/Transportation/ … etection-system.aspx](http://www.calgary.ca/Transportation/)

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