Less time commuting, less time polluting

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If you've ever commuted, at some point you've probably felt like you're spending more time stuck in traffic than at your desk.

A team of students in Germany is trying to shorten your commute, and limit the amount of emissions released into the atmosphere by your car while you're stuck in traffic.

The project [1], called Greenway [2], is a GPS with the ability to access a cloud containing real-time traffic information. After identifying traffic jams—bridges, freeways, main streets—the system ascertains the best alternate route. Because of the Greenway cloud, the system is able to factor in other registered Greenway cars. The GPS can divert each car to a unique route which helps avoid creating a bottleneck on an alternate route.

The system identifies under-utilized roads and redirects cars to routes that use the infrastructure in the most efficient manner. It's an active system, which automatically calculates the more efficient route, as opposed to traditional GPS systems—even those with traffic reports—which only factor in traffic on request of the user. The creators say the system cuts time spent waiting in traffic by 50 percent.

To use Greenway, you would download a Windows Phone app to access the Greenway Cloud, hosted using Windows Azure cloud. Like a normal GPS, the app initially directs you on the traditionally shortest route. But if the Greenway cloud identifies a better, more efficient route, using an optimized graph traversal algorithm, the app will offer that as an option. For a small fee—which ranges depending on fuel and time saved—you can access the Greenway route.

According to the creators, the average car produces 2.5 tons of CO_2 emissions per year. To put that in perspective, a mature tree would take about 80 years to absorb

one ton of CO_2, according to the video. By reducing time spent idling in traffic jams, the Greenway project not only decreases commute time, it also cuts down on CO_2 emissions.

It’s environmentally (and sanity) friendly.

The system isn’t commercially available just yet, but the team is headed to the worldwide finals for Microsoft’s Imagine Cup [3] in July.

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Links:
[1] http://vimeo.com/42571269
[2] http://greenway2012.wordpress.com/
[3] http://www.imaginecup.com/