Gizmodo Australia (online)
20 August 2007

Gizmodo Australian Edition

MON 20 AUG 2007

Everything you need to know about traffic data for in-car sat nav in Australia

I went to the SmartDemo show last week, where Intelematics, a car intelligence systems company (owned by the RACV) were showing off Australia's first traffic data system, SUNA Traffic Channel. SUNA (as in, get there 'sooner'... get it?) will be launching in September, and should be available through a number of GPS brands before Christmas.

The quick news is you should expect to pay between $100 and $300 extra for a unit with SUNA support, but that gives access for the life of the unit. The September date is for Melbourne (they're actually already broadcasting there), with Sydney and Brisbane expected mid 2008, and Adelaide and Perth later next year.

For the longer take on why this is awesome news (and probably the best service in the world right now), and what you need to know right now if you're thinking of buying sat nav (you should be able to buy a 'traffic ready' units now and upgrade later, if you just can't wait for a fully operational unit), read on.

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So, SUNA Traffic Channel is an implementation of the TMC (Traffic Message Channel) standard, in wide use across Europe and increasingly so in North America. This can be delivered over the air in a number of ways, and SUNA has gone with one of the most effective - they'll be piggybacking a Radio Data Stream (RDS) onto commercial FM broadcast networks around the country to deliver the traffic information to your GPS.

If you haven't heard much about this before, what the stream is sharing is a series of reports on disruptions to the regular flow of traffic. At a quiet time of day the system might have around 30 alerts, and at peak hour you're talking 200-300. This data is then integrated into your nav and, depending on the quality of your nav and how it opts to integrate it, you will be informed of any alerts that relate to your current route. A basic system will point out issues, and the delays expected, while a very fancy system will do a lot more on the fly re-routing and detour calculation to help find you the best route possible. Good systems will also let you set filters on how big a delay something needs to cause before it bothers telling you about it.

SUNA Traffic Channel is a world-first system that is actually working with the state roads and traffic authorities. It's actually getting access to the raw data available on the road network through the copper coils at intersections that run the traffic light control systems. On top of this they have access to high wind and ice sensors, where available, and where data is thin on the ground they are using pilot vehicles to send back information on traffic flow. Their human-powered control centre monitors incident causes too, so when your nav gets the message it is both aware of severity and, for your interest, whether the problem is a crash, road works, or even some kind of civil disobedience.

For those who have paid some attention to traffic data overseas, there have been stories on how RDS streams can be hacked, with false data injected. We asked Adam Game, Intelematics CEO, whether that could be an issue out here. He explained that while their system is based on the TMC open standard, their stream is encrypted, so someone would need to know how to convince the device it was the legitimate SUNA Traffic Channel stream. Even then, because they are delivered on a commercial FM band, the power requirements to override such a stream would make any such effort very short range. Game said it's the GPS data that is much more at risk of being falsified, and that would only ever last a very short distance. In short, if some juveniles want to send out some false data for kicks, they're going to a lot of effort to fool pretty much nobody.

If you want a unit that supports SUNA Traffic Channel, and for mine I think this is as 'killer feature' as killer features get, then you need to ask retailers if the sat nav you want to buy is TMC ready, or 'traffic ready', or even 'SUNA Traffic ready'. TMC is the main query, really. You will be reliant on the brand updating that unit in future - some can be updated by software, but others can actually be upgraded through an alternate docking station that has the TMC support embedded in it. So if you already own, you might be able to upgrade in this way. In the next couple of months we'll be seeing the first units arrive that are operational with SUNA, so they'll be the ones to buy whether you are in Melbourne or not.

Intelematics told us they are working with Garmin, Mio, Navman, and Siemens brands right now. Down the track, services will also become available through mobile networks, so phone GPS folks won't be out in the cold. As well as lifetime pricing models, Intelematics believes SUNA Traffic Channel could also be sold on a subscription basis by sat nav companies to make for cheaper entry costs, but that's up to the market. It seems up front we'll see flat all-in pricing.

Posted on August 20, 2007 10:24 AM

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