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August 2013

August 2013 Newsletter - Our undercover top secret mission.....

We are thrilled to announce that Instrument Choice (Synotronics Pty Ltd) won a SA Telstra Business Award during last month's Gala Dinner. Our team had a wonderful night and celebrated hard after our win. We would like to thank all of our wonderful customers, suppliers and staff for their support and encouragement. You can see some pictures of the nights celebrations on our facebook page.

You can send us a message a of support, which will be displayed on the big screens at the Gala diner here, we got a real kick out of seeing all the messages to us pop up on the screens at the SA Event.

In other exciting news we have just found out that we are placed in the Smart Company, Smart 50 Awards, which acknowledges the top 50 fastest growing companies in Australia. Where we place within the top 50 will be announced later this month at an event in Melbourne, stay tuned to our facebook page for updates.

This month we experiment with GPS loggers and track the path our freight takes into and out of our office, it is fascinating to see the detail and resolution in the data.

Please remember if you have any questions regarding tests you need to conduct or specific instrumentation please give us a call.

Until next month…
Tyson Grubb

Product of the month: Super Trackstick

Like all Trackstick devices, Super Trackstick works anywhere on the planet.

Its traveled locations can be shown via a red line that is traced on satellite photos and 3D terrain using the latest mapping technologies from Google™ Earth.

Experiment - Secret Mission (Code Name: G.P.S.)

GPS data loggers are small instruments which contain a GPS receiver that uses information sent from satellites to determine the exact location of the unit.

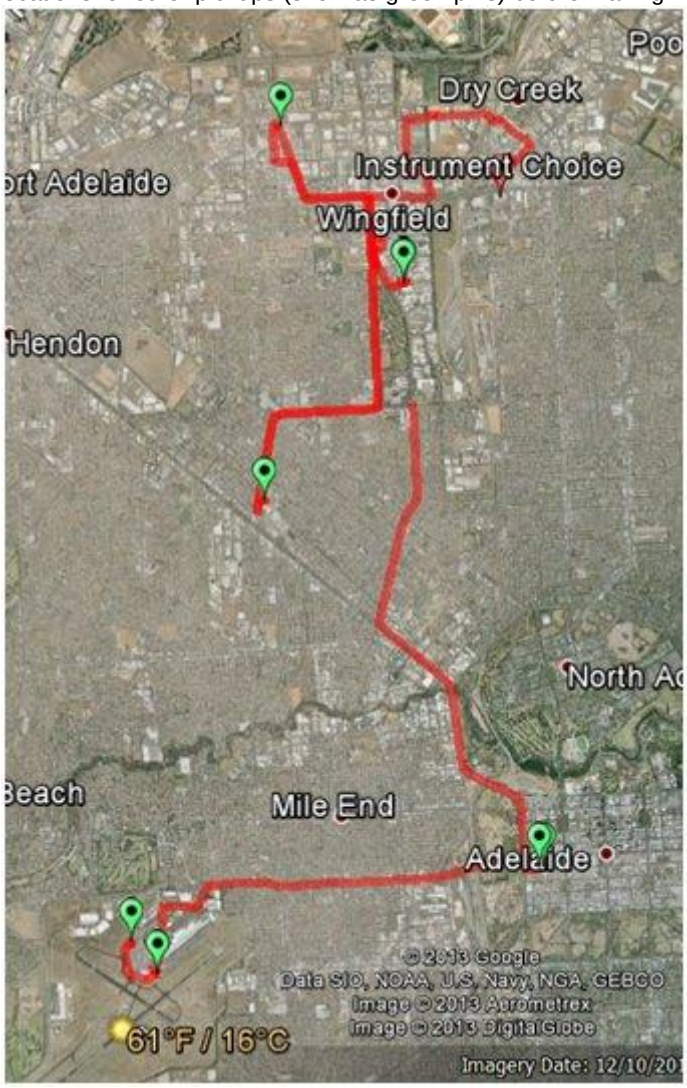
They then store this data to on board memory. GPS data loggers can be a useful tool for looking over the location history of an item whether it be a car, boat, hiker or even an animal.

Introduction
The most common applications for GPS loggers is for freight, asset and vehicle monitoring. But they can also be used to improve emergency services vehicles response times by letting them review the time that different routes have taken. They can also be used by outdoorsy people who wish to have a record of the exact route that they took on a hike or bushwalk. In this month's experiment we are going to use some GPS loggers to determine the route that freight takes from our location.

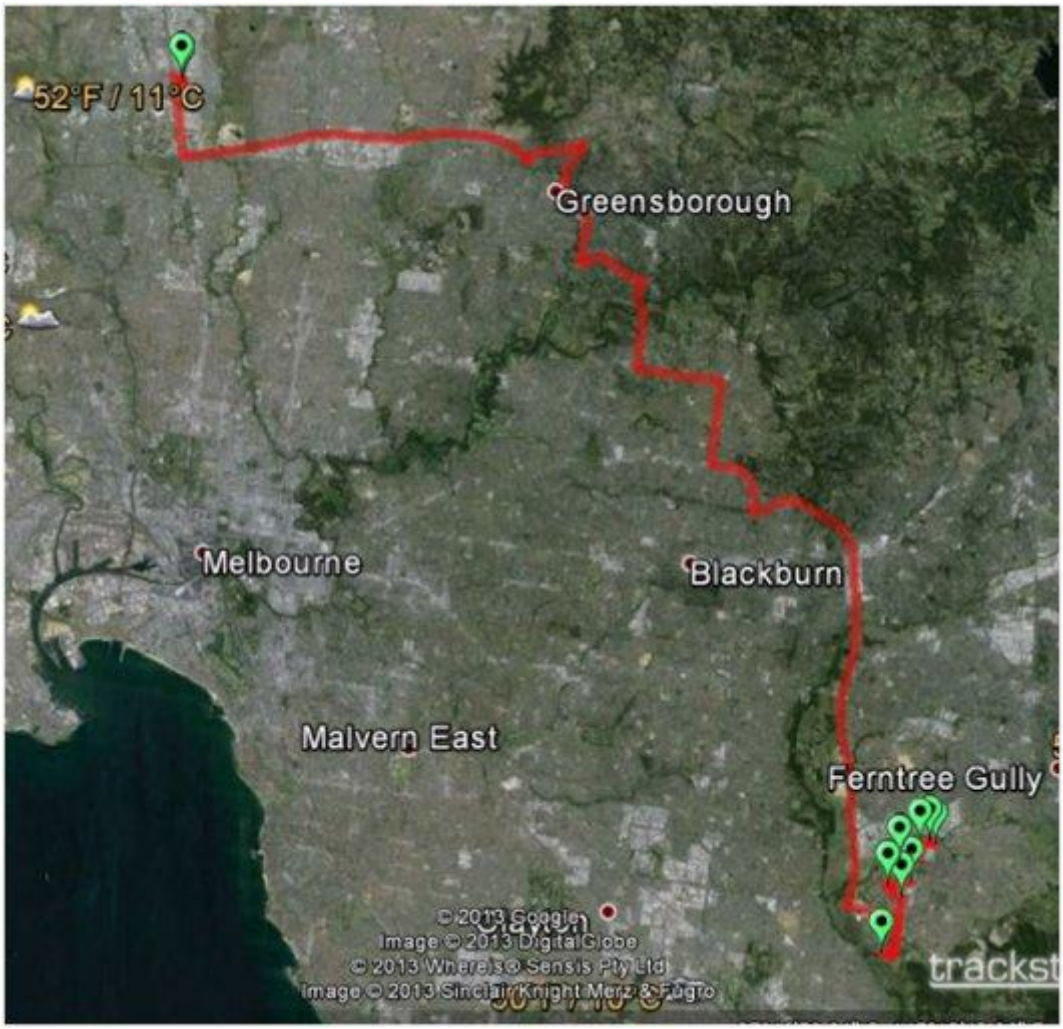
Equipment used:
2 x SuperTrackstick USB GPS logger

Method:
New batteries were installed in each SuperTrackstick GPS logger and the units were set up in the Trackstick Manager software. Prior to shipping each logger was turned on. On return of the logger, the data was downloaded from each unit and exported to Google earth to make is easier to visualise each run.

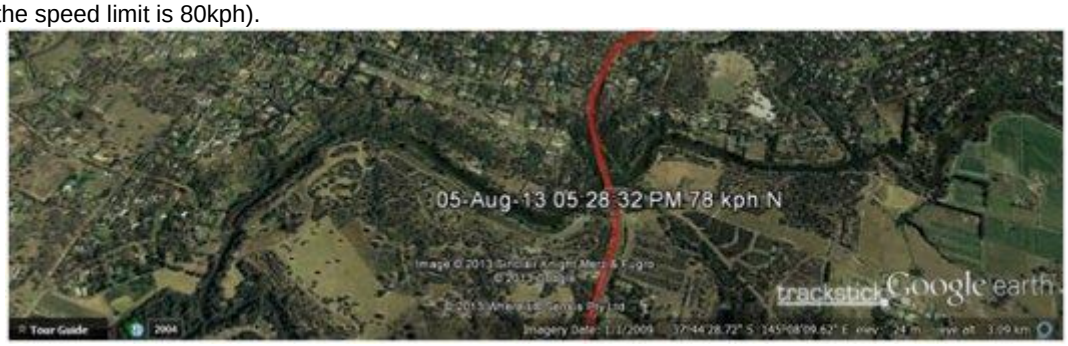
Results:
Run 1. For this run the GPS logger was sent with a shipment from our location to the airport. This run shows our logger being picked up from our location, and the pickup driver going to a number of locations for other pickups (show as green pins) before making his way to the airport.



Run 2. For this run the GPS logger was sent to one of our suppliers. They then activated the logger and sent it to us. Again the run shows the other stops that the delivery driver took and then his long trip to the TNT depot. Once it was in the depot, due to the thick roofing the signal dropped out and no more data was recorded.



You can also check how fast the logger was travelling at a certain spot which could be a useful feature if you have an employee that is constantly getting speeding fines. In the following picture you can see that the driver was travelling at 78kph at 5:28PM on the 5th of August (in this section of road the speed limit is 80kph).



However, in the following picture you can see that this courier driver was driving a little faster than he should have been travelling by doing 103kph in a 100kph zone.

Discussions and conclusions:
GPS loggers can be very useful tools for determining when and where something has travelled.

The SuperTrackstick was very useful in determining the routes that various courier drivers took, however the battery life is limited to a couple of days. For longer term applications in vehicles, the TrackStickPro would be more suitable as it is powered by the vehicles battery.

How does a GPS Logger work?

GPS loggers are designed to use the Global Positioning System (GPS) in order to determine the location of a vehicle, person or asset. GPS is a space-based satellite navigation system setup by the US government. It consists of a network of satellites that provides time and location information in all weather conditions; this can be conducted anywhere on Earth as long the GPS receiver being used has an unobstructed line of sight to 4 or more satellites. A GPS receiver then converts the GPS signals and triangulates them to determine the device's location on Earth.

The loggers in our range are known as Tracksticks and at present there are 2 models available. Both versions work anywhere on the planet and allow the user to record the route, stop times, speed, and direction, which can all be downloaded to your computer at the end of your journey.

Traveled locations can then be shown via a red line that is traced on satellite photos and 3D terrain using the latest mapping technologies from Google™ Earth.

The two models include the Trackstick Pro and the Super Trackstick. The Trackstick Pro is designed to be a fixed logger and can either be hardwired or connected to a cigarette lighter with the included plug. It is generally used in fleet based applications as a way to record and validate shipping, trucking or vehicle routes.

Whilst the Super Trackstick is designed as a portable option as it runs on 2 AAA batteries and features a weatherproof case and magnetic mount. It also features its own temperature sensor which allows for monitoring of the surrounding environment for the user's reference. This model is used where the user doesn't wish to permanently mount the unit or where covert installation is required. So whether you wish to monitor how your fleet drivers go about their day or you wish to monitor journey times there is a Trackstick to suit.

Case Study
We had a customer that wanted to investigate the way in which their excavators and graders were being used throughout the day to validate that they were performing work as per their contract with the council that had employed them. They installed Trackstick Pro's on 5 excavators and 5 graders and used the information obtained to show the council the exact routes and times that the vehicles were in use.

The recorded data and subsequent mapping proved that they were performing work at the said times and locations specified on the contract.

Thank you

from everyone at Instrument Choice - stay tuned for next months issue.

Contact us.

Our experts are happy to help and discuss your project.
Call **1300 737 871** or write an email to customer-service@instrumentchoice.com.au

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