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Insurer takes lead with GPS

Tracking technology gives Norwich Union competitive advantage for pay-as-you-drive, says *Dave Friedlos*

Norwich Union has set the ambitious target of tracking 100,000 vehicles using global positioning systems (GPS) following last month's launch of its Pay As You Drive (PAYD) product.

Speaking exclusively to *Computing*, the insurer said the innovative combination of technology underlying the scheme will ensure that it remains ahead of competitors keen to follow in its footsteps and adopt satellite tracking technology.

Norwich Union's head of PAYD Kay Martin says other insurers are already looking at satellite tracking.

'This is not a bad thing because it validates our use of the technology, but it took a long time to develop and is very complex,' she said.

Martin says Norwich Union encountered a number of challenges in combining the front-office and back-office technology.

A black box unit the size of a CD, provided by Trafficmaster, is installed in the boot or under the dashboard so it cannot be disturbed or tampered with.

'Each unit has a unique ID and catches journey data at one-second intervals,' said Martin. 'In the pilot alone, we generated 40 billion rows of data, so it is a huge exercise.'

The data is gathered using GPS and stored in the dashboard unit until it is transmitted via GSM to a purpose-built, 100TB data warehouse developed by supplier Teradata.

The data is compressed, correlated, analysed and journey information is processed each month. A billing engine supplied by Intec uses this information to create an itemised bill combining a flat-rate fee and variable fee determined by road usage.

An integrated hub developed by Smart 421 acts as a communications interface and allows the various systems to communicate with each other.

'We have been looking at this technology for about six years and have piloted it for more than a year to ensure that we could collect the necessary data for billing accuracy,' said Martin.

Martin: this complex technology has been tested extensively

The scope of the challenge faced by Norwich Union was revealed recently when Transport for London (TfL) ruled out satellite tracking for congestion charging because back-office functions such as billing were still prone to error.

While improvements were made in tracking, with the average location error dropping from 9.7 to 6.7 metres, TfL's billing systems still had average error rates of 0.86 per cent.

Forrester Research analyst Jenny Lau says that Norwich Union has pioneered satellite tracking for the insurance industry and is likely to be followed by other organisations.

'Satellite tracking for insurance is likely to become much more widespread because customers are demanding transparency and this technology accommodates that,' she said.

'But it is important that it is tested before it is rolled out to the masses. Norwich Union piloted this for two years because it involves integration of a wide range of technologies. Getting the back-end right is vital.'

Insurer opens up pay per drive
www.computing.co.uk/2166166

Charging ...in 30 seconds

▮ Norwich Union is the first insurer to offer variable insurance fees based on where and when customers drive. Pay As You Drive is aimed at young drivers and charges are less if vehicles are driven at non-peak and safer times.

▮ Other insurers are considering similar products. More Than is offering a Drive Time policy, where black box technology tracks what time a car is driven. It does not offer variable billing, but penalises for driving between 11pm and 6am.

▮ The Department for Transport has allocated £7.5m to nine local councils for the investigation of road-user charging, which could include the use of satellite tracking.

▮ Vehicle tracking via in-car units is already a mature technology when not including billing. The Highways Agency has fitted more than 150 vehicles with in-car units to enable it to deploy the nearest vehicle in the event of an incident.

Making tracks

Norwich Union is the first UK insurer to offer a variable motor insurance policy based on when, where and on what type of roads customers travel. Its Pay As You Drive product combines a range of technologies.

1 A black box, installed in each vehicle, gathers data at one-second intervals. The data is stored in the unit temporarily before being transmitted via GSM.

2 The data is sent to a purpose-built, 100TB data warehouse where it is collected, collated, compressed and analysed. In the pilot 5,000 drivers recorded data on some 100 million miles from 10 million trips.

3 Journey information is automatically processed each month and, using a billing engine similar to those used at communications firms, an itemised bill including variable and fixed rates is produced.

4 An integrated hub developed by Smart 421 acts as a communications interface and allows the various systems to communicate with each other. It also provides mapping systems to create a visual image of journeys.