Car insurance providers are introducing location-based insurance premium balancing services that will adjust the amount you pay depending on the risk attached to your car’s geographical location. Are these big benefits – or Big Brother?

By Martin Courtney

UK VEHICLE INSURER Norwich Union first offered pay-as-you-drive insurance in 2006, a much-vaunted commercial policy launch preceded by a two-year, 5,000 user pilot scheme and extensive research suggesting that 67 per cent of UK motorists at the time were ‘ready’ for this innovation.

The policy calculates driver insurance premiums using in-car global positioning satellite (GPS) technology, or telematics black boxes, to track vehicle usage and location – including time of day type of road, and mileage – before sending users an adjusted bill at the end of each month.

It was aimed at two specific demographics: drivers aged 18-23 and 24-65, and claimed it could offer insurance for as little as £1 per mile providing customers could avoid driving in the small hours of the morning (especially at weekends), in rush hour, and on low-speed urban roads as opposed to dual carriageways and motorways.

One way or another, the estimable Norwich Union got its numbers wrong – the policy was withdrawn (or ‘paused’ in the corporate parlance of the company) barely two years after launch following low customer take-up. The UK public were clearly not as ready to embrace technology-led innovation as had been anticipated and automotive manufacturers proved reluctant to put the telematics and tracking devices into their vehicles by default.

Above all, Norwich Union noted concerns around data privacy because the service relied on vehicles being constantly tracked and the use of data collected, which proved difficult to assuage. “The notion of having a black box in a car, particularly in the EU, was a concern from a data privacy perspective,” says Philip Carter, senior vice president of software at analyst firm IDC. “Norwich Union invested a lot of money in the pilot but scale is critical – unless you can get that scale in a reasonable amount of time it is difficult to justify the investment and turn it into profitable business line.”

Driver monitoring app

Meanwhile, it has emerged that Norwich Union’s parent company Aviva has not scrapped its pay-as-you-drive ambitions completely. Despite, or because of, its experience with black boxes the company began testing a driver behavioural app called Aviva RateMyDrive in August 2012, building individual profiles of 5,000 drivers via smartphone software. This turns information collected into an individual score that can be uploaded to the insurance
I < company to calculate premiums. “There is an understanding that mobile apps could replace the black box approach,” says Carter. “Most people are OK for telecommunications providers to check where they are and what they do, so there is a convergence along those lines moving forward.”

Despite Norwich Union’s rethink, other insurance companies took up the pay-as-you-drive mantel, achieving comparative if modest success primarily by focusing on the younger demographic where the cost of supplying and fitting the necessary hardware/software to the vehicle can be better offset against notoriously high premiums. These include Insure the Box, Coverbox (underwritten by policies from the Co-operative Bank, Allianz and Sabre), and Ikube, a division of the Towergate Insurance company which has sold GPS-tracked policies to 17-25-year-olds since 2006, having signed-up around 10,000 subscribers to date.

“People sometimes use it for a year or so then drop-off, we are seen as a starting point to get on the insurance ladder;” says Ikube managing director Ian Brown. “The younger market has higher premiums, but we are starting to expand and look to provide more of a limited mileage type product to a wider audience. The barrier to that in the past has been the relative cost of the technology against the premium saving potential, but the technology is advancing all the time and more people are getting used to the idea.”

According to Thilo Koslowski, vice president of the automotive practice at market-watcher Gartner, in Europe and other parts of the world where rates can be pretty expensive, the insurance companies have gone after younger drivers to allow them more digestible insurance rates. “But ultimately,” he says, “they need to figure out a way to make these more attractive to everyone.”

The Ikube policy uses a TomTom satellite navigation system allied with a telematics box to record location, speed, mileage and ‘harsh steering or braking events’ to calculate premiums, which Brown insists would take much more than somebody going around a roundabout a little too enthusiastically to invalidate any deal. As with similar services, its terms involve a driving curfew during the hours of 11pm and 5am (when a disproportionate amount of serious accidents are calculated to occur), which is reviewed every three months.

“If they do break the curfew they pay an additional premium,” says Brown. “We call them the next working day – very rarely do people deny that they have, and if they do we point them at the website to confirm it. Similarly we have not come across anyone wanting to block the monitoring system. We get warning messages if something is not transmitting to us very well – not if they disconnect the battery during a service, but if there is no feedback for a period of time, or they suddenly appear in an area completely different from previously.”

Telematics will enable insurers to adjust premiums based on the actual driver’s ability and usage using real data... This also means that if you are not a safe driver, you could pay more premium-wise;’ Paul Felton, Direct Line

Big Brother looking after you?

Curfews and monitoring are just two bones of contention for many – the question is the extent to which they willing to put up with them for the sake of lower insurance premiums, and whether those savings really are all that significant. Koslowski feels that insurance companies are unlikely to risk alienating potential customers by pushing ‘Big Brother’ tactics too far into...
driver-car environments, which create a very personal sense of space and privacy. "Tracking driver behaviour to see how they drive, that is getting too close to the creepiness line for some people, though others are likely to be fine with it," he says. "Those that think they can save money if they drive in a certain way will happily open the doors to the insurance companies, but others will not."

The driving public may, however, be getting more comfortable with the idea of having their location monitored by GPS — whether it is behind a steering wheel or as a pedestrian. It can come as a surprise to private motorists that commercial drivers have long had their movements and behaviours tracked by their own employers and the development; and increasing adoption of standard mobile telephone tracking technology — including GPS-enabled smartphones, which feed into locational services from Google Maps and others — is changing consumer attitudes.

Ikube’s Brown points out that tracking also offers a number of advantages, both for friends and relatives able to track a vehicle’s progress through TomTom’s Web portal and from a safety aspect to both detect when accidents have occurred and help to work out why they happened.

“The technology can do a lot more now,” says Brown. “When we first started, it was simpler GPS boxes that really just looked at displacement and speed which did not look at gravitational forces, and we just started adding more of the behavioural things on the top [of the functionality]. “So as opposed to how fast you are driving you now get access to a huge database of road data, which tells you average speed for those roads for example. You can be accurate to within a few metres. We also have software able to recreate the scene if a serious accident happens, so we can know, for instance, if the car veered left.”

A European Union initiative called the Ecall System, planned to come online throughout member countries in 2015, may also change the perception of the in-car black box, if only by familiarising drivers with tracking and telematics technology. The Ecall hardware will automatically dial the emergency services in the event of a serious road accident being detected — based on airbag deployment and impact sensor information — transmitting GPS co-ordinates to local authorities in an effort to reduce response times and get assistance to the crash scene more quickly.

Premiums on behaviour Insurers say pay-as-you-drive goes some way to eliminate the age-old insuree complaint that premiums are unfairly set based solely on postcode or the activities of people within the same age group regardless of individual characteristics, history, or address, by relying more on closely-tracked behaviour of the driver.

“One of the biggest concerns regarding the current way insurance premiums are determined has been insurers base risk not >
because statistics say someone similar to them is more likely make a claim, they will pay a higher premium," explains Paul Eelton, head of telematics at Direct Line, an insurer that is currently trialling GPS tracking technology with a view to introducing commercial services at a later date.

"Telematics will enable insurers to adjust premiums based on the actual driver’s ability and usage according to real data. Of course, this also means that if you are not a safe driver, you could pay more premium-wise."

Pay-as-you-drive calculations
Brown believe that the new technology “could open up a few postcodes that some insurers have shied away from in the past” by contextualising the risk assessment.

“Just because you as a responsible driver happen to live in a certain district, should you be condemned for that? This is where it is really evolving, around geo-fencing for instance [where alerts are sent if a vehicle leaves or enters a certain area], and where high value vehicles are involved. This is the area where pay-as-you-drive could truly challenge traditional car insurance business models.”

While some have questioned the ability of GPS technology to deliver the sort of precise information that insurers require to calculate premiums based on behavioural analysis, others point out that, though not perfect, its accuracy is reliable enough for insurers’ purposes – perhaps more so than for directional navigation.

“It is all about the accuracy of the technology; even getting simple information such as mileage and sending it back to the insurance provider can help them understand how a vehicle is being used,” says Gartner’s Koslowski. “I think the technology is accurate enough [for that] – more than enough for a couple of yards, in most cases though not 100 per cent.”

“GPS can be pretty accurate, as many of us find out from using satellite navigation technology. Though which lane you are in on a motorway would not be important for determining your competency as a driver, however, your driving style will certainly assist an insurer,” says Direct Line’s Felton.

The company states that its policies are aimed at all of its customer demographic, not simply the younger portion. It is a bid to achieve scale and get a more accurate idea about individual driving behaviours and attitudes rather than calculate premiums based on aggregate figures for their risk group – in theory, rewarding drivers whose habits meet the company’s estimation of low risk, and penalising the others.

“GPS tracking can provide much information that enables us to determine a drivers’ competency and vehicle usage,” says Felton. “From braking, cornering, mileage, and the time the vehicle is driven, all this information and more will enable an insurer to determine an individual risk profile.

“Traditional rating factors will still need to be incorporated – such as the area a policy holder lives, the type of vehicle, and previous claims history.”

Tracking within the law
This element of pay-as-you-drive car insurance has the potential to cause more controversy and debate than any other – what constitutes safe and dangerous driving according to how drivers brake, corner, and accelerate – and how insurer algorithms apply those metrics to come up with their premiums. “There is a legal aspect as well – just because you accelerate fast does not mean you are a bad driver,” Koslowski points out, “but perhaps one who is actually more aware.”

Brown adds: “Insurers have to be careful. We do not want to penalise people having to emergency stop for the right reason, such as if a loose dog runs out in front of you – all the algorithms are designed to have sensitive driving events, but what we look at is if drivers are continually doing it.”

At this stage of the market’s development, talk of new technology to support pay-as-you-drive insurance is perhaps specious – the more pressing challenge for insurers is to overcome privacy concerns and change people’s attitudes to GPS or mobile tracking for insurance purposes.

With the European Court of Justice ruling that insurers will no longer be able to charge different rates to men and women, more will now look to calculate premiums based on other criteria and diversify their own portfolio in order to compete with more nimble rivals, even if it means cannibalising their own revenue streams in the process.

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