A new software to assess driving behaviour and driving risks

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Dimensión	Magnitud que representa
Altura	Velocidad instantánea
Anchura	Aceleración media en la cercanía a punto
Color	Índice de riesgo en el intervalo

Software seen with Google Earth

One of the aims imposed by the European Union in 2004 is to reduce the number of traffic accidents. However, despite the measures taken by the different administrations and the consequent decrease in the number of accidents, the results for 2010 are not close to those set by Europe. Gerardo Reveriego, a young researcher of the University of Málaga, has designed software that informs drivers of the risk situations s/he has while driving. This allows drivers to self-assess themselves and improve their driving behaviour.

'Our main idea is that the system can be used by a large number of people. That's why we have worked so that the program does not have any cost, everything is based on free software', Reveriego says.

Moreover, in order to be able to use it, it is not necessary to have complex expensive accessories. ‘Just with a mobile phone that has a global positioning system (GPS) and an accelerometer, users will be able to know their driving behaviour' the researcher added.

This software gathers data on the acceleration and speed of the car and after a driving route, it generates a file that is displayed on a computer. ‘The route that is made can be seen on a free Google map reader, such as Google Earth. In such route, you can see a series of polygons with different colours, width and height that provide information on the levels of risk, centripetal acceleration and speed, respectively' Gerardo Reveriego explained.

For example, if we have taken a curve too fast, the program will display a series of red polygons which indicate a high risk of having an accident; certain width indicating the acceleration we had when taking the curve, and a height indicating the speed. ‘The higher the acceleration, the higher the risk' , this software-designer said.

This software has several applications: ‘We would like the Spanish General Traffic Directorate DGT to receive anonymous reports -provided that drivers agree with that- on the places that are a risk for drivers, as these are indicative of accident concentration spots. Therefore these spots could be corrected or signposted so as to avoid more deaths' ,Reveriego added.

This system can also be implemented in driving schools. ‘Students often have difficulties to follow their instructor's commands and drive at the same time; that's why our idea is for them to have a mobile device in their cars so that they can analyse their route afterwards' this telecommunications engineer said.

Insurance companies could also be interested in using this system, as

they can give a bonus or penalise depending on the driver's driving style. ‘With this product, travellers transportation companies can get to know their users' level of satisfaction, as if drivers make abrupt manoeuvres this software would indicate so' Reveriego said.

In addition to the help this system supposes, this researcher is already looking for future research lines. ‘One of our objectives is for cars to have this new facility from the factory. In order to do so, we would need to start collaborating with a car company interested in it. This way we would manage to implement this program in the new navigation system cars have, and then car dealers would contribute to reduce the number of accidents' he said.

Source: Andalucía Innova