

LCR4.0

Together for Manufacturing.



European Union
European Regional
Development Fund

Satsafe Limited

Date: 27/06/2017

Technologies: IoT Telematics device

Sector: Vehicle Safety

Primary partner:
Virtual Engineering Centre

Background

Based at the the Science and Technology Facilities Council's (STFC) Campus Technology Hub, Daresbury, Satsafe are a technology start-up company developing a range of aftermarket in-vehicle devices to improve safety and security of road users.

Satsafe's products include in-vehicle 'black-box' devices and it's flagship product TelematiCam designed for use by insurers and fleet managers to monitor driver behaviour in order to reduce accidents and more fairly price insurance based on individual driver scores.

Approaching LCR 4.0

Satsafe was interested in technical support for their IoT telematics that could have a huge impact on insurance risk management, fleet and logistics operations around the world. The intended telematics camera system, TelematiCam, include a dashcam, Satsafe mobile App and cloud analytics platform.

If a driver is involved in a serious collision, the device's, in-built GPS and accelerometer can identify the exact time, date and location of the incident as well as retain a high definition video recording of the crash - 6 seconds before and 6 seconds immediately following the impact event. If severe, this data can be sent automatically to an emergency service, allowing for a fast response based on the geographical data given and an understanding of the impact experienced by passengers involved which may then require medical attention.

The main objective of this project was to provide system architecture recommendations to enable the IoT connectivity of the dashcam, TelematiCam to the cloud platform.

Partner Support

One issue was the limited algorithms available whilst hoping this device would reflect more realistic scores which could include other factors such as the weather.

The Virtual Engineering Centre (VEC) built a virtual prototype which demonstrated how Satsafe can connect all their components together. Two members of the VEC used the cameras for a length of time as this data was then tested by being sent to their own system so they can assess the efficiency as well as the devices effectiveness allowing for early stage feedback.

The VEC offered initial advice on the intellectual property dimension of the commercial development of software whilst also determining the concept of operation in collaboration with Satsafe.

Satsafe have also worked with The Hartree Centre through the LCR 4.0 programme, helping to enhance the driver scoring and crash detection algorithms as well as the system architecture for the cloud analytics platform. This is to ensure that the TelematiCam solution is fit for purpose as an enterprise level commercial application suitable for the fleet management and insurance industry globally.

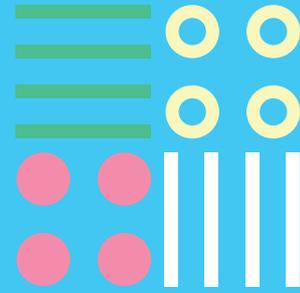
Working into the Future

Over the next 12 months Satsafe will be continuing its work as lead partner for road safety in CityVerve - the UK's £15m IoT city demonstrator project. In partnership with Manchester City Council, Transport for Greater Manchester and leading technology businesses including BT, Cisco and others, the Company will be demonstrating the commercial, societal and environmental benefits of telematics technologies when deployed across various mobile IoT use cases.

For example, Satsafe are working alongside large Taxi firms and Manchester City Council with a view to demonstrate the value to all road users of a taxi driver monitoring and scoring system. As well as identifying good driving practices, the solution can easily identify low scoring journeys and also those drivers that may need re-training. Those taxi companies engaging with CityVerve not only demonstrate that they take public safety seriously, but the individual drivers may also benefit from more competitive insurance premiums if they continue to drive well.

From April 2018, all new type vehicles sold in Europe will be equipped with an automated crash alert system called eCall. When a vehicle is involved in a serious collision, the in-built telematics system will automatically send a data file to the emergency services call handler containing the vehicles VRN, exact location, time of incident, fuel type as well as establishing a two-way voice call. The aim of eCall is to get the appropriate emergency services to the scene more quickly.

By July next year, satsafe aims to have the Satsafe TelematiCam App accredited with the 999 App Accreditation Scheme potentially saving lives through faster emergency assistance for all drivers in the future.



Results

The VEC has provided Satsafe with initial advice on intellectual property dimension of the commercial development of software and a summary of topics that could be included in a set of heads of term.

Following a comprehensive analysis of the current hardware, system architecture and raw telematics data produced by the current solution, the VEC and Satsafe have successfully developed a series of system diagrams for the TelematiCam which are now used by Satsafe to communicate with system developers and stakeholders.



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