

Telematics - Modular Software Platform

Hardware independent telematics modules for mobile devices

Based on our modular software platform any telematics application could be designed and implemented on various mobile devices efficiently and easily. Deploying a model based design approach makes sure, that the resulting software is hardware independent and that development time and cost is reduced. In order to fully address current and future innovative telematics applications, a precise and reliable localization as well as a trusted communication is essential. Both are main features of our cutting-edge solution. Due to model based design the whole application can be simulated. This way, the software can be verified and validated in very early stages of the development process. Furthermore, this approach allows easy maintenance of the application software on the mobile devices and effective update handling.

Precise and reliable localization

The precise and reliable position is the main input to our core algorithm. It enables you to identify virtual gantries, corridors and (nested) zones in urban or rural areas with a maximum of accuracy and reliability, depending on vehicle's direction of travel or independent from it. Our modular approach considers the localization to be part of the software running either on the mobile devices or on the back-office infrastructure. Furthermore, the resulting behavior of the algorithm could be visualized and validated by web applications. The whole modular software platform is highly flexible and scalable, so that it could easily deal with big data showing up in productive environment.

Automatic generation of geo objects (ISO 17575)

For telematics applications many various objects like roads, crossings, downtown areas as well as company premises or agricultural areas need to be modeled and linked to a digital map. This requires an effective handling of miscellaneous and ever changing digital map data. Our map cluster approach supports the automatic generation of these geo objects (virtual gantries, corridors, zones), which are designed to be unambiguously identifiable. In addition, the approach even ensures a reliable update mechanism and distribution on many differing systems. Applying comprehensive methods for visualization and validation allow you to identify errors immediately and fix them early in your development process.



Digital map and update handling

The digital map is derived from the geo objects described above. Depending on the use case, the digital map could be integrated both on the mobile devices and in the back-office software. All geo objects are marked with additional attributes like time stamps and validity. This way, preventive update handling of the digital map could be easily applied as well as accurately switching in between geo objects (schemes).

Scalable server platform for big data

All mobile devices of vehicle fleets can be managed easily by our flexible modular approach of the back office server platform. The current status of all mobile devices is available at any time. This is ensured by trusted communication and deterministic data management. Our highly scalable server platform is designed to be used for managing big data. Furthermore, featuring open interfaces our platform can be seamlessly integrated with other systems, e.g. billing.

Contact

M2C ExpertControl GmbH
Buchberger Strasse 40
94560 Offenberg, Germany
Email: info@m2cec.com
www.m2cec.com

