

CASE STUDY

infopulse



Development of a Modern In-vehicle Infotainment System

Complex Embedded Systems with Onboard 3d Navigation and Intuitive HMI

Client: One of the top automotive suppliers

Industry: Automotive

Location: Germany

Employees: 5000+

PRODUCT AND SOLUTION

Infopulse has been addressed to assist with the software development of embedded IVI systems. The developed functionality comprised offline and online navigation functionality, advanced HMI with voice control, high accuracy of route calculation. Also, we enabled seamless integration with the cloud, vehicle's hardware and other software systems.

FEATURES

Navigation

3D/2D map rendering, intelligent destination input, dynamic route guidance and positioning, self-learning predictive navigation, voice recognition.

Embedded System

Development and configuration of Linux/Yocto-based OS, personalization, virtualization, inter-process communication, performance analysis, and memory optimization

HMI

Innovative safety-based UX/UI, integration of audio speech recognition and voice assistance technologies, software development for personalized entertainment systems (audio, video, in-vehicle internet), QT/QML development.

DELIVERED SERVICES

- Requirements analysis
- Architecture and design elaboration
- Development
- Module and unit testing
- System testing

TECHNOLOGIES

C++ 11/14/17

Python

OpenGL/ES

in-vehicle embedded systems

Yocto Linux

cross-platform development: ARM, x86

BUSINESS VALUE

The developed infotainment system has improved the end user's driving experience with such features as 3D predictive navigation, intuitive voice-based HMI, POI search, online and offline real-time location tracking, and more.

Infopulse helped the customer improve the overall development process:

- reducing time-to-market;
- decreasing operational costs;
- optimizing resources.

The quality of delivered solutions has increased due to:

- the applied requirements analysis;
- well-planned development process;
- automated testing;
- repeatability of the achieved results.



ABOUT INFOPULSE

Infopulse, part of the leading Nordic digital services company TietoEVRY, is an international vendor of services in the areas of Software R&D, Application Management, Cloud & IT Operations, and Cybersecurity to SMEs and Fortune 100 companies across the globe. Founded in 1991, the company has a team of over 2,000 professionals and is represented in 11 countries across Europe and North America. Infopulse is trusted by many established brands, such as BICS, Bosch, British American Tobacco, Citrix, Credit Agricole, ING Bank, Gorenje, METRO Cash & Carry, Microsoft, Mondelēz, OTP Bank, Raiffeisen Bank Aval, SAP, UkrSibbank BNP Paribas Group, VEON, Vodafone, and others.

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