

INFORMATION SOCIETY TECHNOLOGIES (IST)

PROGRAMME



AIDE IST-1-507674-IP

Final AIDE HMI (description of the overall AIDE HMI both HW and SW)

Deliverable No. (use the number indicated on technical annex)	D3.4.4		
SubProject No.	SP3	SubProject Title	Design and development of an adaptive integrated driver-vehicle interface
Workpackage No.	WP3.4	Workpackage Title	Adaptive Interface Design and Development
Activity No.	A3.4.6	Activity Title	HMI technical and functional verification
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Executive Summary

This deliverable describes the overall HMI that has been designed in the AIDE project including both the hardware and the software characteristics.

It describes how the main AIDE HMI concept has been declined in the four demonstrator vehicles developed in the project which will be object of the final user tests. These vehicles are a luxury car developed by CRF, a city car developed by SEAT, a truck developed by VOLVO and an additional city car developed by PSA.

The first part of the document contains an Introduction to the global objectives of the project and particularly to the HMI design work.

Then Chapter 2 describes how the HMI design and development work received input from other Work Packages of Subproject 3 and how this Subproject cooperated with the other AIDE SPs.

Chapter 3 describes the innovative elements of the AIDE system and Chapter 4 the contribution given by the design and development of the adaptive integrated driver-vehicle interface to the overall AIDE objectives.

The HMI description of each demonstrator is then reported in dedicated Chapters, namely Chapter 5 for CRF luxury car demonstrator, Chapter 6 for PSA car demonstrator, Chapter 7 for SEAT city car demonstrator and Chapter 8 for VOLVO truck demonstrator.

Each of these Chapters is organized according a similar structure and reports in sequence for each vehicle: the HMI overall structure, the functions implemented, the Input and Output devices the Graphic User Interface, the Modality adaptation, the Nomadic Device integration and finally the HW and SW description.

As already mentioned in Deliverable 3.4.1- "Driver-vehicle interaction and communication management"¹, it has to be stressed that there exists no "best in-vehicle HMI". Thus, the most crucial requirements for the ICA system are derived from the fact that the HMI is strongly competitive and OEM specific. So, ICA, as all the main components of the AIDE system has been designed to be flexible and scalable concerning the detailed system behaviour, the extent of applications and the I/O device constellation, modular and independent from individual components.

This permits to the system to perform its common strategies on different vehicles built with partially different constellations of I/O devices and with different graphical user interfaces.

¹ [1] Deregibus and all, AIDE D 3.4.1- Driver-vehicle interaction and communication management, 2006