



# HAVEit

Highly automated vehicles for intelligent transport

7th Framework programme

ICT-2007.6.1

ICT for intelligent vehicles and mobility services

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## The future of driving

### Deliverable D52.1 Automated Queue Assistance: Sensors installed in vehicle (1<sup>st</sup> SW version)

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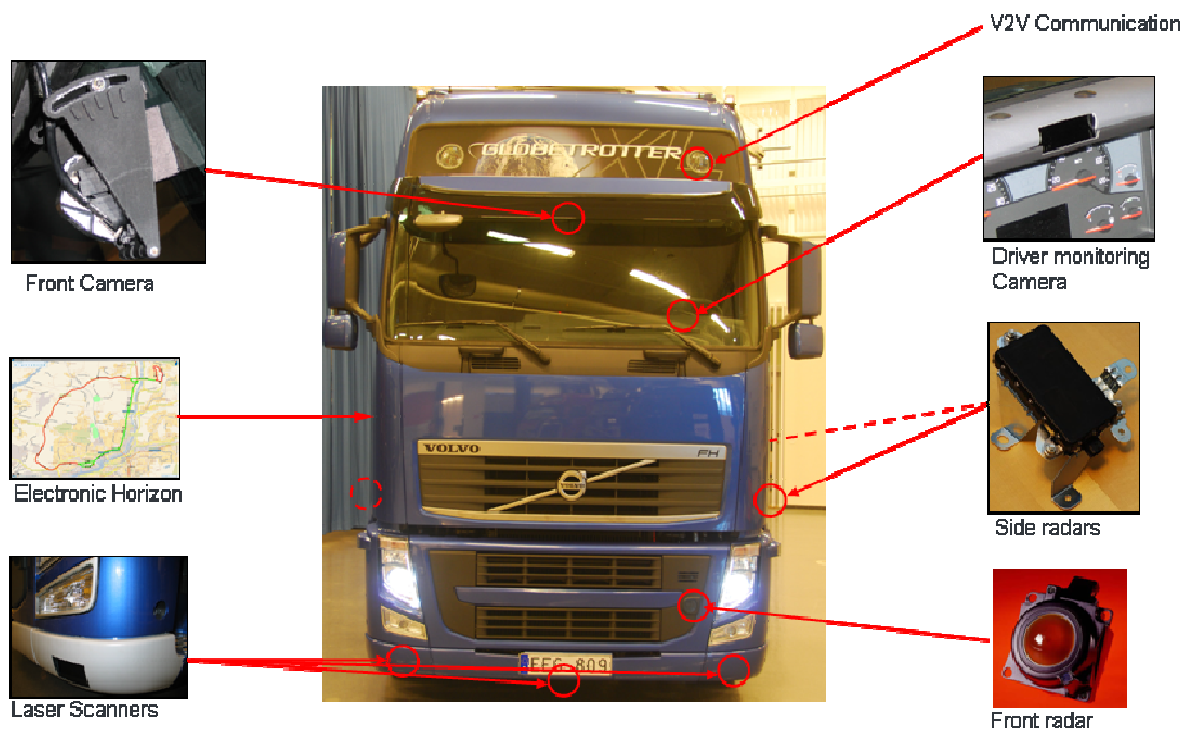
## Executive summary

The overall objective of the HAVEit project is to develop technical systems and solutions that improve automotive safety and efficiency. Volvo Technology (VTEC) contributes to the overall objective by developing a safety-focused Automated Queue Assistance (AQuA) application. The Automated Queue Assistance application (WP5200 in the HAVEit project structure) uses sensor information to control the vehicle laterally and longitudinally to support the driver in underload situations such as driving on a highway in low speeds and in congested situations.

The main objective of WP5200 during project periods M4 – M15 was to specify, develop, and integrate these perception sensors in the demonstration vehicle.

This document summarizes the sensor configuration in the WP5200 demonstrator vehicle, the sensor installations, and results from testing the first version of the sensor software.

The sensors are key components in the effort to increase the safety on roads by using environmental and preview information to help the driver in underload situations such as driving on a highway in low speeds in congested traffic situations. The demonstrator vehicle, a Volvo FH12, has been equipped with a number of sensors like front radar, front camera, side radars, laser scanners, electronic Horizon, a driver monitoring camera and V2V communication (see Figure 1 below).



**Figure 1: VTEC AQuA demonstrator.**

All above mentioned sensors and components, with exemption of the V2V communication which will be delivered in project month 20, were integrated into the vehicle and into the environment perception architecture. All components work according to expectations with satisfying results and will build a good basis for the upcoming development, which of course will included major updates and improvements in sensor functionality as well.

With the noted exceptions of the late V2V system, WP5200 is following the established time plan. The integration part of the sensors in the vehicle has been successfully completed and WP5200 can now proceed with next step according to the project plan.

Further details of the sensor specification and architecture can be found in the corresponding development deliverables D11.2 Specification [1] and D12.1 Architecture [2].

## References

- [1] D11.2 Specification, HAVEit deliverable, 2008
- [2] D12.1 Architecture, HAVEit deliverable, 2008
- [3] PReVENT (including sub-project MAPS&ADAS), Integrated project co-funded by the European Commission, included in the FP6 Programme, web page: <http://www.prevent-ip.org/>