

DENSE



D1.2

Project Report 1

Dissemination level CO

Version 1.0 Final

Lead contractor DAI

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Tekes



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1 Summary of the technical progress and main results

Within the first period the main focus of WP₁ lay on establishing good project communication. A collaboration space was set up and mailing lists were created and are continuously maintained. Regular meeting and phone conferences were established on management level, work package level and within the active work packages.

Within the technical work packages, the main focus lay on WP₂. It is starting point and framework for the whole work as it defines the functional requirements of the integrated sensor system, scenarios and benchmarks as well as adverse weather conditions. Work started and included:

- Research of impact of bad weather on accident occurrence and deduction of use cases
- Characterization of adverse weather conditions
- Definition of functional requirements
- Benchmarking for tests to be conducted

A draft version of Deliverable D2.2 was compiled. The result showed that specific problems for driving were not in focus. Thus, the consortium decided on including also specifics as spray/wet surface which results in rework. The use cases that together outline the performance needs of the DENSE system are agreed. The needs of the components road state sensor and LIDAR are agreed and described, as well as the radar needs. The needs of the SWIR gated cam are agreed and described.

WP₃ focused its activities on laying the foundation for detailed system specification. It was imperative to find a common ground for defining the system architecture by first agreeing on concept of functional analysis of the use cases. Achievements so far:

- Concept of functional analysis developed and explained to all partners in WP₃
- Specification template available
- Framework for defining the system blocks and interfaces drafted
- Initial technical specification of each sensor and the CNN-based sensor fusion pipeline

In WP₄ the preliminary work has already been started.

WP₅ started analysing the state-of-the art in the field of CNN/DNN. Extensive literature research has been done on different Deep Learning platforms.

In WP₆ partners were preparing the first test activities in the weather chamber to be done in new period. Furthermore, the dissemination activities were started. The website was set up and the development of a unique project identity started. The dissemination strategy was discussed and relevant DENSE conference identified. Initial dissemination material was prepared and contributed to the ECSEL Book of Project, ECSEL Poster, and the EUCAR Posterbook.