



Airport Research Facility Hamburg

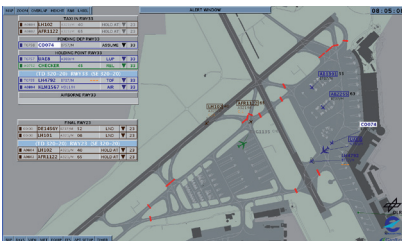


DFS Deutsche Flugsicherung

Working positions for development,
evaluation and demonstration



Use of the Eurocontrol Early Demonstration
and Evaluation Platform eDEP



Cooperation

In parallel to the installation of an A-SMGCS Level 2, DFS, Hamburg Airport and the German Aerospace Center (DLR) agreed on the cooperation on installing and operating a unique field test platform for research and development in the field of Air Traffic Management and Airport Operation. The cooperation offers a large variety of opportunities for airport stakeholders and academia.

In addition to DLRs' existing research infrastructure like fast- and real-time simulations and the A-SMGCS in Braunschweig, the *Airport Research Facility Hamburg* provides a unique platform for developing, testing, evaluation and validation of future support systems in an operational environment of a mid-size airport.

Some advantages of the facility are

- use of real-time data during development,
- short cycles between innovative ideas and feedback of operational people,
- direct evaluation of existing system components,
- test of new concepts and future technology without operational implementation and
- optimal infrastructure for shadow mode trials

Technical Background

The operational A-SMGCS is capable of sending real traffic data to the research network by an extended ASTERIX interface. Besides the merged traffic situation from the sensor data fusion, the system also provides RAW data from every single sensor and information from various functions of the system (e.g. alerting).

To avoid interferences with the operational system a unidirectional interface was implemented. The special equipped working room and a working position integrated in the apron control are the base infrastructure of the platform. Additional airport areas can be integrated by connecting them to the research network.

Usage

Besides the research focusing on the higher levels of A-SMGCS like Planning and Guidance, the *Airport Research Facility Hamburg* is also designed to allow research in the context of A-CDM and TAM (Total Airport Management). The partners have identified the need of development and implementation of an integrated airport management with a common data set. The Airport Research Facility Hamburg can provide the framework for this new approach towards a solution for more efficient resource utilisation and a holistic airport management system for airside and landside processes, based on implemented Airport CDM compliant systems and processes.

With a common research agenda the partners coordinate the areas of work that should be considered and prioritise relevant projects. A continuous adaption of the agenda ensures a flexible adjustment in the use of the platform and allows reaction on developments in the aviation sector, especially in the dynamic context of SESAR.

The use of the *Airport Research Facility Hamburg* is not limited to the partners DFS, FHG and DLR. It is a clear intention to offer the advantages of the platform also to interested parties and carry out projects in collaboration.