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European AIS-Database

An operating model for air traffic control initiated by private enterprises with controlling interest from Austria

Efforts to unify the European air space – a basic mission of the European air traffic control authority EUROCONTROL - begin to take shape. EUROCONTROL embarks on a new innovative and at the same time revolutionary way to provide AIS-data for air traffic control: it separates regulatory functions from the activities in service and support, and outsources the service provision for the European AIS-Database (EAD) to a private enterprise. FREQUENTIS, a medium-sized company with headquarters in Vienna, brings in comprehensive high-tech know-how and controls about one third of the enterprise handling EAD's service provision.

The European AIS-Database is the only system in the world that administers the supra-regional management of Aeronautical Information Systems (AIS)-data. AIS-data comprises all news and information that are necessary for the secure, orderly and smooth handling of flights. Due to the "Convention on Civil Aviation" all members of the European Civil Aviation Conference (ECAC) are obliged to provide such data. Since each country fulfilled above requirement in its own way up until now, 38 national systems and data sources of varying quality exist at the moment.

Reaction to increasing economic pressures

Inefficient processes and investments and the resulting high maintenance costs were at the base of demands for a unification and harmonisation of the varying AIS-systems as early as the late 70's. An increasingly complex data structure called for improved data quality. Finally, in 1997 EUROCONTROL and the national authorities decided on the organisation of a central "European Aeronautical Information Services Database" (EAD).

FREQUENTIS was responsible for the technological development and implementation. Now the system is to go online on June 6, 2003. At the same time the service provision enterprise "GroupEAD Europe S.L.", a privately managed operator who is responsible for the efficient provision of services and the surveillance and maintenance of the entire EAD-system network, takes up operations.

Group EAD as operator model for AIS-data

The option to set up an external operator model was part of the initial EAD-requirements to FREQUENTIS. A service provision under private enterprise management was supposed to ensure AIS-services throughout Europe that were competitive and in line with market requirements. „It was important to me to separate the operator model from the EAD-project development and thus create two separate organisations" declared Hannes Bardach, MD at FREQUENTIS. "This leads to greater flexibility of both enterprises and improved project stability."

Thus, FREQUENTIS screened the sector for suitable project partners and was able to win two major European air traffic control organisations for the model Group EAD – the Spanish AENA (Aeropuertos españoles y Navegación) and the German DFS (Deutsche Flugsicherung GmbH).

An adequate operator model had to be conceived. For FREQUENTIS this meant to break new commercial grounds: service level agreements had to be specified, a financial model for the newly founded company had to be drawn up. The Viennese University of Economics supported FREQUENTIS in their efforts.

Success on a professional and on a personal level

Aside from the professional tasks to be tackled, the human element had to be considered here. The project had to be handled with cultural sensitivity and tact. "We faced a number of different cultures and a variety of organisational forms," Hannes Bardach remembers as he describes the early times of the project during which the partners needed to get to know one another. "Viennese Diplomacy" booked another success and finally all reviews by EUROCONTROL and Price Waterhouse Coopers were passed with flying colours.

The GroupEAD Europe S.L. itself was founded in April of 2001 as multinational company with headquarters in Madrid. It is run as holding company, which means that national European air traffic control authorities have the option to have holdings in the company. At this time each one of the three syndicate partners – AENA, DFS, FREQUENTIS – holds about one third of the shares. Responsibilities are divided up as well: headquarters is in Madrid, management in Frankfurt and FREQUENTIS Vienna is responsible for the technology. "It is simply a European compromise model", Hannes Bardach explains, pleased with this political achievement.

Exemplary project for the future of the ATM-sector

The availability of consolidated data is a safety critical element in air traffic: first, EAD is going to go online provisionally. From August 2003 on, it is going to be run by two centres, one in Madrid and one in Frankfurt. The technological and operational infrastructure is thus fully duplicated and mirrored from Madrid to Frankfurt. All relevant IT-services are provided by two high-security data processing centres in Copenhagen. The GroupEAD Europe S.L. also runs a training centre in Frankfurt and a quality assurance centre in Madrid.

Hannes Bardach is convinced that "... the EAD-project will not only provide fail-safe, high-quality data. It is going to have an enormous impact on the way data is handled in air traffic control in the future.

EAD is an example of an innovative cutting-edge co-operation model: a public authority such as EUROCONTROL devises and implements together with private enterprises like FREQUENTIS solutions that will allow materialising the vision of a "Single Sky for Europe".

FREQUENTIS also delivered and implemented the system

No other company has a similarly comprehensive and thorough understanding of this project as does FREQUENTIS: the Viennese company realised the development and implementation of the complex EAD-software as leader of the syndicate and in co-operation with specialised sub-contractors from a variety of fields. FREQUENTIS managed to do this in time and within the budget. Proudly, Hannes Bardach comments: " We thus managed to realise an IT-project that has a more complex structure than the current chip card project in Austria."

Data is only offered centrally - and still each ECAC-member state remains responsible for their information and has authority over the data that is provided to the other members in its name.

The migration of the first member states (Slovenia, Sweden and the Austrian Austrocontrol) to the new system has begun. After all ECAC-member states have completed their migration to the system, full efficiency of the EAD-data base should be reached some time in 2004. In sum, the European NOTAM-efforts could be reduced by 60-80%.

Additional information concerning the EAD-project

For additional information concerning the EAD-project, please go to www.EUROCONTROL.int/ead/.

Additional information concerning FREQUENTIS

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