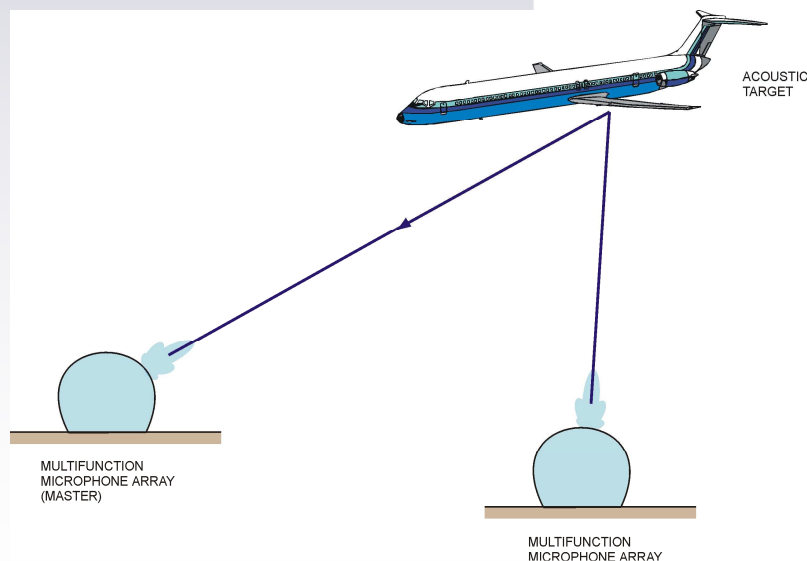




SAFE-AIRPORT

Development of an Innovative Acoustic System for the Improvement of Co-operative Air Traffic Management

The **SAFE-AIRPORT** project involves the development of an innovative acoustic system based on two Passive Phased Array Microphone antennas capable to discover and track aeroplanes up to at least sixth nautical miles distance in air and on ground.



More Information:

<http://www.safe-airport.org>
(coming soon)

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Objectives

The system is completely integrable with airports air traffic management procedures and it is an effective air control system for ATZ (Aerodrome Traffic Zone), autonomous for smaller airports and integrated with standard control systems for greater airports.

The system consists of two acoustic sensors, to be used in open environments, and a control unit linked to the sensor with fibre optics connection, with a control console, managed by an operator, to be installed inside the airport structure.

Data survey portability to radar platform and data visualisation and exchange are compatible with "Eurocontrol Standard Document for ATS ADEXP [DPS.ET1.ST09-std-01-01]".

The main advantages of **SAFE-AIRPORT** system respect to radar systems will be the lower cost and the electromagnetic and acoustic pollution free.

Project details

Project Acronym: **SAFE-AIRPORT**

Project Reference: 507008

Duration: 18 months

Project Cost: 1.81 million euro

Contract Type: Specific Targeted Research Project

Project Funding: 1.04 million euro

Description of the work

The system development includes the complete simulation of the system, through the development of a simulation software that includes external acoustic environment modelisation and the relative test conditions scenarios. This will allow to control system requirements and performances.

The simulation will be used both to guide system design and to verify system performances in collision-risk situations.

The development of the simulation software will be in compliance with "Federal Aviation Administration Standard Software Development for the NAS [FAA-STD-026]".

The project is planned to be realized by means of two distinct steps. The first step (STEP 1) of 18 months (financed by the present contract) includes design and development of one sensor. The second step (next 18 months not financed by the present contract) concerns the complementing of the first sensor and the production of the second sensor.

The STEP 1 will involve:

- System and Testing Requirements Specification;
- Simulation Software Design and Development;
- System Software Design and Development;
- Phased Array Design, Simulation and Development;
- Electronic Hardware Design and Development
- Dissemination;
- Exploitation;
- Project Management.

18th November 2004, 3.30 PM, presentation of **SAFE-AIRPORT** results at San Diego Meeting (USA) of the ASA (American Society of Acoustics).

Participants:

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|--|----------------|
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