



## European Research Area

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## Press release

# Less fuel, less noise, more comfort: European research to deliver advanced wing technologies, for new generation commercial aircraft

Brussels, 1 July 2002

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AWIATOR, a new European Technology Platform project to reduce fuel burn and noise in future commercial airliners was launched today in Toulouse, in the presence of Airbus' COO Gustav Humbert, Airbus' Head of Engineering Alain Garcia and European Commission representatives. On this occasion, Airbus and the other partners in the AWIATOR consortium celebrated the kick-off of this new EUR 80 Million technology platform. The project, co-financed for 50% by the EU's research budget, will validate advanced technologies for future aircraft wing design. It will directly contribute to the ambitious goals set out in the High Level Report "European Aeronautics: Vision for 2020". They include a 50% reduction of fuel burn and a reduction by half of aircraft noise.

For [Philippe Busquin](#), EU Research Commissioner "European aeronautic research has a key role to play in securing Europe's leadership in this strategic area. Research must ensure that our aeronautics industry remains competitive in global markets. But it must also help to meet the European citizens' expectations for safer and user-friendly transport that respects the environment. Research is at the core of a modern industrial policy. By building a true [European Research Area](#), we reinforce the science and technology base for our cutting-edge, strategically important industries, such as aeronautics and space. AWIATOR is a good example of broad-based, EU-wide, innovative partnerships between industry and public research."

### BACKGROUND

**Broad-based international co-operation.** Beside the Airbus engineering teams in France, Germany and the UK more than twenty partners from industry in Europe and Israel (e.g. Alenia(I), EADS(D), GKN Aerospace(UK), IAI(Israel), SENER(E), SONACA(B)) and from European aeronautics research (e.g. CERFACS(F), DLR(D), NLR(NL), ONERA(F)) will jointly develop and validate the technologies. They will be supported by several universities in Athens (GR), Lisbon (P), Louvain (B) and Marseille (F) and numerous test centres and subcontractors

**Ambitious goals for future aircraft.** AWIATOR will target three key areas:

- Far field flow of aircraft, especially addressing the wake vortex and noise phenomena.
- Near field flow around aircraft, looking at advanced wing design aspects (e.g. large winglets for performance improvements)
- The control of the flow around and the wing loads of aircraft by use of novel control surface elements and turbulence sensors.

The target is a 5 to 7 % in terms of drag reduction, especially at take-off and landing, and 2 % in terms of trip fuel reduction for long-range flights. Additional expected benefits include a noise reduction of two decibel (EPNdB). The project will also deliver new design rules for future commercial aircraft and for the update of existing ones.

**Challenging test programmes planned.** The four-year project will perform numerous challenging tests in Europe's biggest wind tunnels (e.g. DNW-LLF, ONERA S1) and in a water towing-tank (HSVA). It will become one of the first customers in the new large

catapult test facility B20 of ONERA in Lille (F). The final highlight of the validation process will be two flight test campaigns with more than hundred flight hours planned for 2003 and 2005. They will be performed by the Airbus A340 MSN001 test aircraft, specially modified for AWIATOR.

**Key example of European Research Area in Aeronautics** The project builds on results of complementary research in Europe. Necessary critical technologies for AWIATOR have been developed by several projects within the Community Research Framework Programmes (e.g. C-Wake, EUROLIFT, HiReTT). Other key enabling technologies financed nationally will also contribute significantly to AWIATOR (e.g. NEXUS project of the British Department for Trade and Industry, Pro-HMS and RAWID projects of German Ministry of Economics and Technology).

Overall, this project represents key example of the emergence of a European Research Area in Aeronautics. The Sixth Research Framework Programme - just launched by the European Union - will provide the largest ever Community budget for aeronautics research. It will stimulate enabling technologies for the long-term goals of "Vision for 2020".

#### **NOTE FOR EDITORS**

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