Technologies to IMProve Airframe Noise

Fact Sheet

Project Information

TIMPAN
Grant agreement ID: 30870

Start date 1 September 2006
End date 30 November 2009

Funded under
FP6-AEROSPACE

Overall budget
€ 5 260 175

EU contribution
€ 2 965 000

Coordinated by
AIRBUS OPERATIONS SAS
France

Objective

TIMPAN will address the community noise reduction objectives for business and large commercial aircraft by focusing on the airframe noise issue, inherent to high lift and landing gear components, responsible for about half of the total aircraft noise in approach situation.

This will be addressed at two complementary levels:
* Feasibility of innovative/breakthrough technologies to identify ways to meet long-term objective of 8dB airframe source noise reduction.
* Improvement and optimisation of state-of-the-art low noise components to meet mid-term objective of 5dB airframe noise reduction, and apply to 2010-2015 aircraft programmes.

Landing gear activity:
The innovative technology investigation will concern noise reduction techniques for bluff body structures, including plasma actuation, an "air curtain concept", flow control through blowing and the use of "meshes" to reduce turbulent flow noise. The advanced low noise main gear design, as outcome from the previous F5 Technology
advanced low noise main gear design, as outcome from the previous EC Technology Platform project SILENCE(R) will be improved, focussing on noisier parts that were not treated previously.

High lift device activity:
For long-term application, the innovative low noise concepts concern locally applied technologies and slat-less high lift systems. Mid-term noise reduction efforts comprise the investigation of absorptive wing leading edge treatment and the aeroacoustic optimisation of a conventional generic high lift wing profile.

These technologies will be evaluated, depending on their maturity, in terms of integration, cost, performance associated to the noise benefit, so as to prepare the exploitation phase.

TIMPAN will achieve this technology breakthrough, investigating both unexplored fields and capitalising from previous projects, by bringing together 14 actors from the European aeronautics industry including aircraft manufacturers, landing gear manufacturers, key research institutes, universities and SMEs gathering the best European expertise.

Programme(s)

Topic(s)

Call for proposal
FP6-2005-AERO-1

Funding Scheme
STREP - Specific Targeted Research Project

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