

## **ACOUSTICS2008/2207 SILENCE(R): a major step towards aircraft noise reduction**

Eugène Kors

Snecma, Etablissement de Villaroche Sud - UE, Rond-point René Ravaud - Réau, 77550 Moissy-Cramayel  
cedex, France

From 2001 up to 2007, SILENCE(R) has focused on the development of aircraft noise reduction technologies. As an European Union project coordinated by Snecma, SILENCE(R) brought together some 50 companies (including Airbus, Rolls-Royce, MTU Aero Engines and Snecma), research centers and universities. The overall budget was 112 million euros.

Combined with innovative low-noise operational procedures studied at the same time, SILENCE(R) has achieved an impressive 5 dB noise reduction. This meets the medium-term objective of the European Commission's R&D Framework Programs, and marks a significant advance towards ACARE's research goal of a 10 dB reduction in aircraft noise by 2020.

SILENCE(R) carried out successful tests of more than 35 prototypes to check 10 noise reduction technology concepts. These included several advanced low noise fan rotors, as well as components for a complete low-noise nacelle (negatively scarfed intake, "squid" nozzle fitted with high frequency liner), flight tested on an Airbus A320. Flight tests were also carried out on an Airbus A340 with landing gear fitted with aerodynamic fairings.