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FUTURE PROSPECTS TO SATISFY NOISE LIMITS WITH FURTHER SOURCE REDUCTION - A EUROPEAN RESEARCH INITIATIVE

D. Collin

SNECMA, Departement Acoustique - YYA - Centre de Villaroche, 77550, Moissy-Cramayel, France

Tel.: 33 1 6059 7396 / Fax: 33 1 6059 8725 / Email: dominique.collin@sneema.fr

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ABSTRACT

International standards governing the noise of newly manufactured aircraft are developed by ICAO (International Civil Aviation Organisation). The current standards, originated in 1977, are contained in Chapter 3 of the annex 16 to the convention on International Civil Aviation. Since 1991 a major review has been undertaken within the ICAO Committee for Aviation Environmental Protection (CAEP) which will eventually lead to the application of more stringent noise limits. In the process, recommendations were made in favour of a balanced approach, to address the airport noise problem, challenging the ICAO member states to "study and prioritise research and development of economically justifiable technology", besides complementary actions on airport land-use planning and noise abatement operational procedures. Taking the opportunity of the Aeronautics Task Force(ATF) set up in 1995 by the European Commission, the European industry has proposed, under the larger label of "the Environmentally Friendly Aircraft", an Aircraft Noise research action plan based on ICAO's "balanced approach". Following this initial work, the European industry has elaborated a coordinated approach, aimed at a 6 dB noise reduction objective over a 7-year period and regrouping into a "clustered" structure several Industrial and Scientific project proposals covering the needed technology base.

Five individual 3-year research projects have been effectively started at the beginning of 1998. The coordinating "cluster" structure (X-NOISE) has been implemented and the European Commission Framework 5 programme will see follow up projects proposals that should allow a successful shift to the technology validation phase, while covering all promising possibilities of aircraft noise reduction.

Note: for more information about this work, please contact the author.