



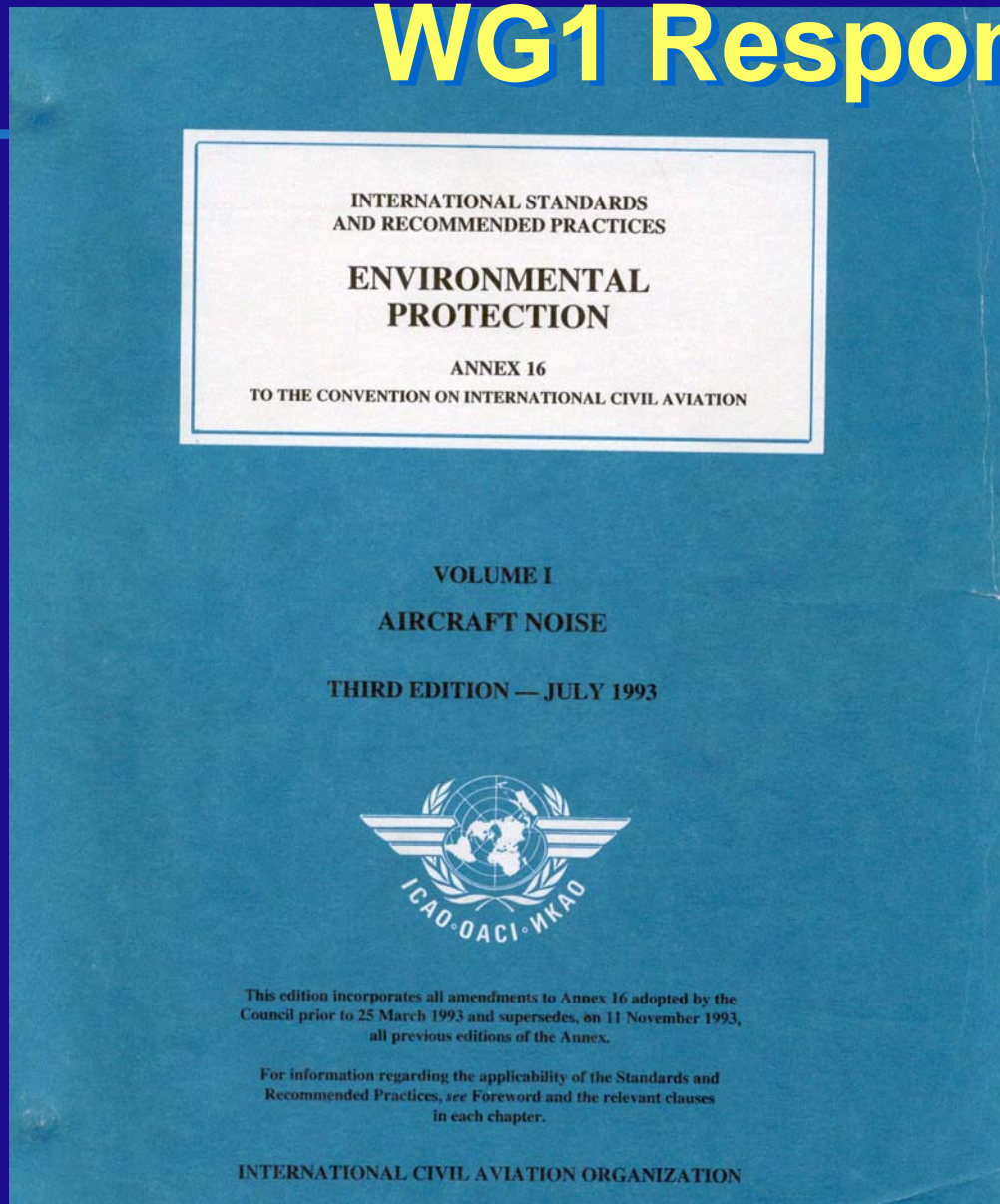
Noise Certification Workshop

*ICAO/CAEP Current Activities
on Noise Certification*

Role of CAEP Working Group 1

The main aim of the Working Group 1 (WG1) under the Committee on Aviation Environmental Protection (CAEP) is to keep the ICAO noise certification standards up-to-date and effective, whilst ensuring that certification procedures are as simple and inexpensive as is practical.

WG1 Responsibilities



→ Aircraft noise certification SARPs for:

- Subsonic jets
- Propeller-driven
- Helicopters
- Tilt-rotor
- Supersonic

WG1 Responsibilities

- Equivalent procedures
- Promotes uniform implementation

Doc 9501-AN/XXX

**ENVIRONMENTAL TECHNICAL MANUAL
ON THE USE OF PROCEDURES IN THE
NOISE CERTIFICATION OF AIRCRAFT**

THIRD EDITION — 2004

*Approved by the Secretary General
and published under his authority*

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Current WG1 Composition

*Subject area experts drawn from CAEP **Members** and Observers*

- Direction Générale de l'Aviation Civile (DGAC)
- Egyptian Civil Aviation Authority
- Japan Civil Aviation Bureau (JCAB)
- Luftfahrt-Bundesamt (LBA)
- Luftfartsverket (Swedish CAA)
- Netherlands Civil Aviation Authority (NLA)
- Transport Canada
- U.K. Civil Aviation Authority (CAA)
- U.S. Federal Aviation Administration (FAA)

Current WG1 Composition

Subject area experts drawn from CAEP Members and Observers

- Airport Council International (ACI)
- Arab Civil Aviation Commission (ACAC)
- International Airport Transport Association (IATA)
- International Coordinating Council of Aerospace Industries Associations (ICCAIA)
- International Federation of Airline Pilots Associations (IFALPA)

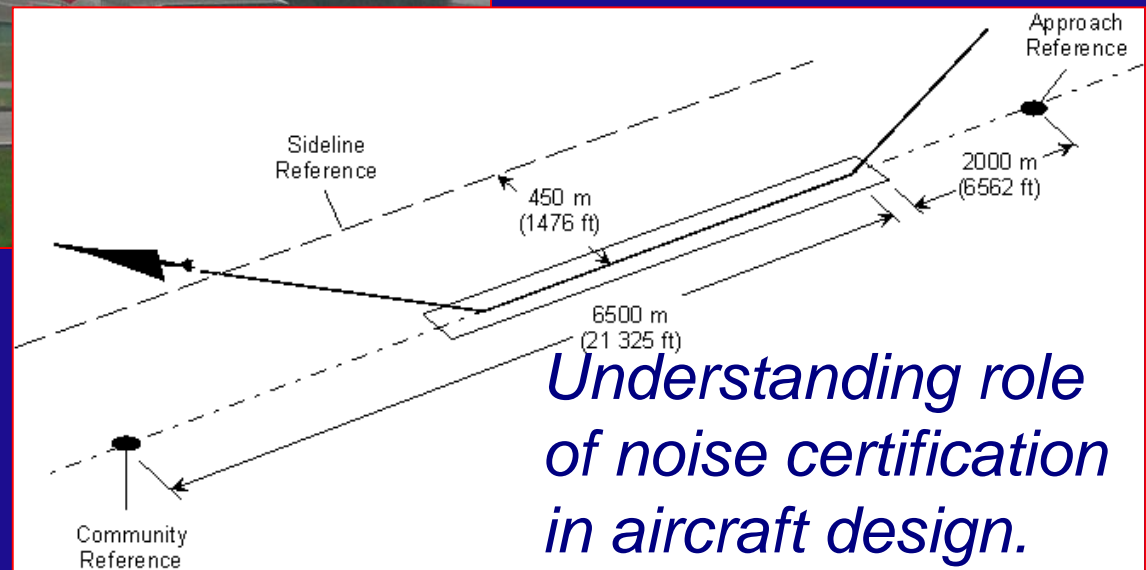
Current WG1 Work Programme

→ Future of the Noise Certification Scheme

“The prime purpose of noise certification is to ensure that the latest noise reduction technology is incorporated into aircraft design demonstrated by procedures which are relevant to day to day operations, to ensure that noise reduction offered by technology is reflected in reductions around airports.” [CAEP5 Report]

Current WG1 Work Programme

✈ Future of the Noise Certification Scheme



Current WG1 Work Programme

→ Supersonic Noise Certification and Sonic Boom

“...the role ICAO must play is to ensure that the development and any introduction into service of supersonic civil aircraft and of the supporting air navigation services are made in an orderly manner, so as to safeguard the safety, regularity, and efficient of civil air transport to the advantage of the people of the world while avoiding effects that would be detrimental to the public and international civil aviation.”

.....

- c) Not create a noise exceeding the level accepted for the operation of subsonic jet aircraft;
- d) Be able to operate without creating unacceptable situations for the public due to sonic boom;” [Resolution A16-4]

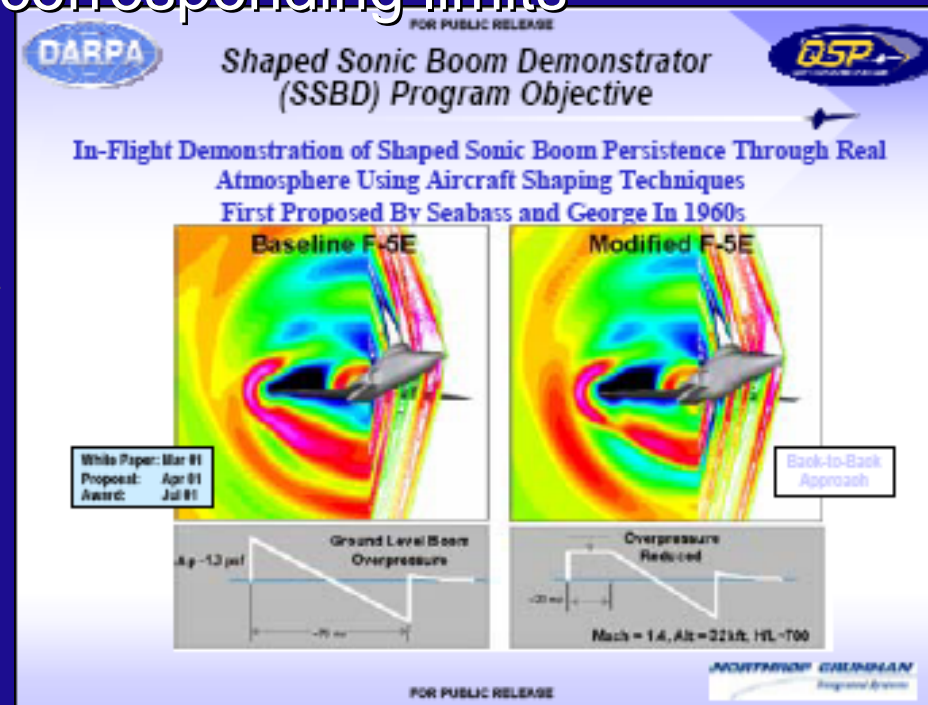
Current WG1 Work Programme

➔ Supersonic Noise Certification and Sonic Boom

“...to achieve international agreement on measurement of sonic boom, the definition in quantitative or qualitative terms of the expression ‘**unacceptable situation for the public**’ and the establishment of corresponding limits”

[Resolution A33-7]

Recent scientific breakthroughs



Current WG1 Work Programme

✈ Aircraft Type Noise Certification Database

NoiseDB

(Accessible on the CAEP page through the ICAO Secure Site on the Internet.)

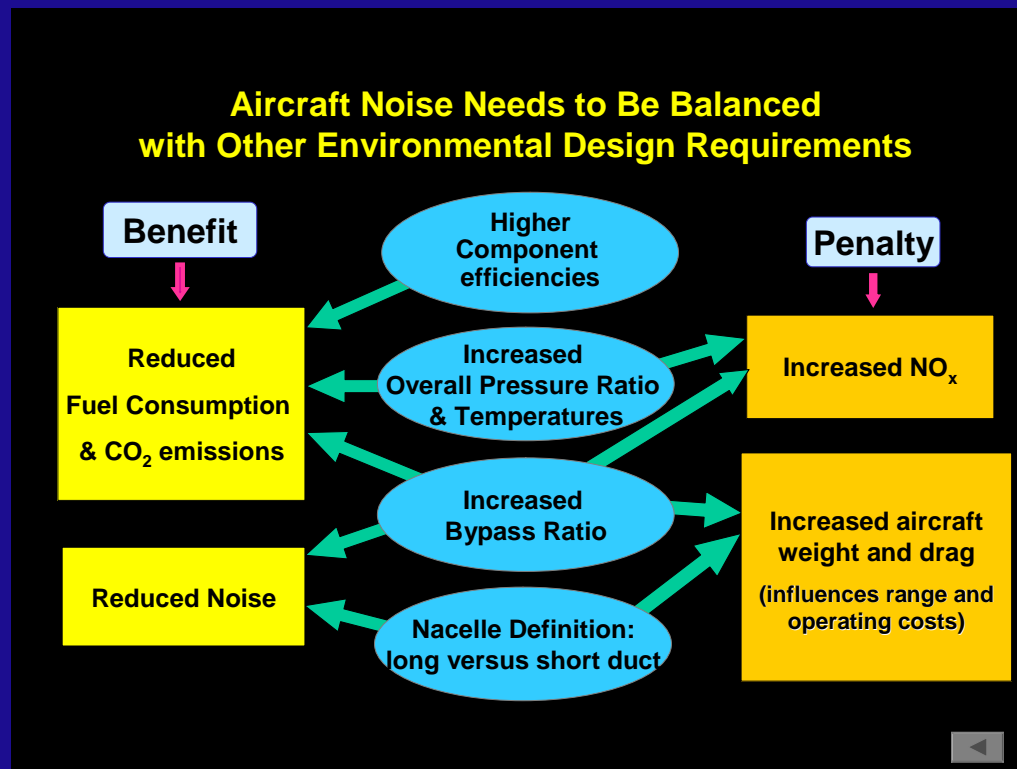
The screenshot shows a software window titled "Certification noise database" with a "Request creation" tab. The window is divided into four sections: "Airframe parameters", "Engine / Nacelle parameters", "Regulation parameters", and "Noise levels". The "Airframe parameters" section is active and contains the following fields:

- Manufacturer : [dropdown menu]
- Type : [dropdown menu with "Begin by" selected]
- Version : [text input]
- MTOW (t) : [text input]
- MLW (t) : [text input]
- Slats / Flaps TO (°) : [dropdown menu]
- Slats / Flaps APP (°) : [dropdown menu]

Below these fields is a large text input area. To the right of the "Regulation parameters" section, there is a dropdown menu labeled "All". At the bottom right, there are four buttons: "Request", "Aide", "Run request", and "Help".

Current WG1 Work Programme

✈ Monitoring Noise Technology



- Provide advice and information on mid- and long-term noise reduction technology prospects.
- Study the relationship between noise and emissions trade-offs.

Current WG1 Work Programme

✈ Rotorcraft

- Study ways to make rotorcraft noise reduction schemes more effective in addressing both noise certification and land use planning purposes; ...

Building links to other research.



Current WG1 Work Programme

✈ Technical Issues

- Engine de-rate as an operational limitation in an application for noise re-certification.
- Revision of aeroplane certificated noise levels.
- Repairs limits on engine acoustic liner.
- Noise measurement of non-acoustical change due to engine modifications.
- Use of noise documentation guidelines.
- New environmental technical manual.
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