



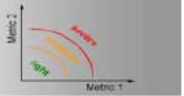
Specific Workshop  
organised by  
**Task Group 3.2 Recategorization**

# RECATegorization

TU Berlin, June 20-21, 2011

## Motivation

- ICAO's separation distances were defined in the late sixties.
- Since then, national modifications of the rules were enforced, a new category SUPER with additional separation was established for A380 .
- Definition of wake turbulence separation minima was always based on measurements and the interpretation of measured data. A methodology for the definition of safe separations is lacking.
- Obviously, current separation distances are safe. However,
  - o they are over-conservative under numerous conditions,
  - o risk is not evenly spread over all aircraft pairs,
  - o there are multiple local variations



## **Wake Encounter Criteria Work-Shop Berlin, 19-21 April 2006**

Resulted in RE-CATEGORISATION

**Back home**

### **General agreements:**

- 1.) The ultimate purposes of the workgroup are:
  - (a) Improving capacity by changing wake turbulence separation standards and so reducing delays, supporting the introduction of new aircraft – leading to profits for airlines, aircraft makers, airports etc, without reduction in safety (risk)
  - (b) Reducing operating costs (fuel) by increased system efficiency
- 2.) The definition of Encounter Criteria (distinction between acceptable and unacceptable encounter) is a key element for a model-based safety assessment.
- 3.) Initial members of the core sponsoring organisations are:  
FAA, PoC: George Greene  
NASA, PoC: Wayne Bryant  
Eurocontrol, PoC: Jean-Pierre Nicolaoan  
Airbus, PoC: Gordon Höhne  
NRC, PoC: Anthony Brown  
DLR, PoC: Klaus-Uwe Hahn  
TU Berlin, PoC: Robert Luckner  
Boeing, PoC: Jeffrey Crouch  
Mitre, PoC: Jeff Tittsworth (tbc)  
ALPA, PoC: Jim Duke (tbc)
- 4.) Core sponsoring organisations shall develop a joint work plan that addresses the ultimate objective 'capacity enhancement' and which provides a common basis to acquire funding and resources from funding organisations.
- 5.) ICAO and JAA/EASA should be contacted soon to join core sponsoring organisations.
- 6.) Presentations may be published
- 7.) An additional meeting (in the US?) prior to October 2006 is desirable

### **Agreed Actions:**

- 1.) Core sponsoring organisations to define the work plan for working group until 01 OCT 2006, George Greene (FAA) will coordinate this activity
- 2.) Wayne Bryant (NASA) will write a press release on this workshop, as soon as possible
- 3.) Minutes and presentations to be published on Wakenet Europe and Wakenet US web sides (Wayne Bryant / NASA, Jean-Pierre Nicolaoan / Eurocontrol, Prof. Robert Luckner / TU Berlin)

## RECAT

- The RECAT initiative of Eurocontrol and FAA has the objective to define harmonised, safe and adequate minimum wake turbulence separation standards for both departure and arrival operations.
  - o **Phase I:** Optimised Categories (2011)
  - o **Phase II:** Static pair-wise separation (2013)
  - o **Phase III:** Dynamic pair-wise separation (2018)
- Results of RECAT Phase I are currently under review, will be updated and then presented to ICAO
- The RECAT I methodology uses wake strength (circulation) and roll moment coefficient as severity metrics.
- RECAT II and III may require or benefit from more sophisticated methodologies.

## Workshop Objectives

- Start the dialogue on methodologies, models and severity metrics for RECAT II and III
- involve experts from regulators, air traffic service providers, stakeholders (airlines, airports, pilots, and aircraft manufacturers) and research.
- Identification of research needs.