Re-categorization of the Wake Turbulence Separation Minima

RECAT

Wakenet-3 Europe Workshop
17-18 November 2010
RECAT – The need

- ICAO Wake Turbulence Separation Standards, 3 categories, H, M, L.

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<th>Heavy Follower</th>
<th>Medium Follower</th>
<th>Light Follower</th>
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<tr>
<td>Heavy Leader (&gt;136t)</td>
<td>4NM</td>
<td>5NM</td>
<td>6NM</td>
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<tr>
<td>Medium Leader (7-136t)</td>
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<td>Light Leader (&lt;7t)</td>
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- Most of the European Airports use ICAO standards
- Many local variations to accommodate more traffic
- ICAO Wake standards are not up to date
- No accidents and no significant incidents due to wake vortex in Europe
RECAT – Momentum

- Massive amount of Research
- Wake vortex measurement systems, like LIDARs
- Good understanding of the phenomenon
- Modeling the phenomenon
- New aircraft types enters into operation
RECAT – Objectives

• New wake turbulence categories and associated separation standards

• EUROCONTROL – FAA joint effort

• Simple assumptions:
  ➔ Safety
  ➔ Not only weight (wingspan, speed)
  ➔ Cost / Benefit
  ➔ Methodology for future aircraft types
  ➔ No changes on the flight deck
  ➔ Minimum modifications on the ground (if any)
  ➔ Minimum changes in procedures
RECAT – Scope

• Design a 6 category wake turbulence scheme
• Provide the safety case to support the technical solution
• States will decide the implementation time schedule, based on their local needs
• ICAO will prescribe both, present H M L and RECAT
• Next steps: procedures, human factors, Doc4444 amendments proposal
RECAT – Challenges

• Preserve present way of working (today some airports are using 6 categories – EGLL, FAA)

• Complex Safety Case; ICAO baseline

• Traffic Mix factor, optimum compromise

• Step stone towards SESAR
RECAT – Status

• Technical solution finished
• Capacity benefits 3 - 5% for very busy airports
• Safety Case activity on-going
RECAT – proposal
**RECAT – proposal**

**Optimized Separation Matrix (nm)**

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<th>C</th>
<th>D</th>
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A: super heavies  
B: B777, A340…  
C: B767, A306…  
D: A320, B737, MD80…  
E: RJ85, AT45, E145…  
F: B190, C525…
RECAT – proposal

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The project is now at its final stages, and within EUROCONTROL the required consultation process with stakeholders is presently ongoing.

Thank you