



Session 2 Airborne Separation Systems and Procedures

Rapporteurs

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List of speakers

- ✓ Bob Hilb - UPS
- ✓ Francis Casaux - CENA
- ✓ Mica Endsley - MIT
- ✓ Kevin Corker - NASA
- ✓ Anand Mundra - Mitre
- ✓ Lars Lindberg - SAS
- ✓ Sandy Lozito - NASA
- ✓ Vu Duong - Eurocontrol
- ✓ John Hansman - MIT
- ✓ Reiner Onken - University Bundeswehr
- ✓ Karlheinz Jünemann - Lufthansa



To start with

- ✓ UPS is planning to equip 600 aircraft with ADS-B / CDTI. Provides base for understanding the operational utility.
- ✓ SAS is firmly committed towards ADS-B based upon STDMA.
- ✓ ICAO position: ACAS must remain independent of ASAS.
- ✓ Drivers for change:
 - Safety / Capacity / Efficiency / Cost



Items of agreement

- ✓ ADS-B and a Cockpit Display of Traffic Information (CDTI) are part of the future.
- ✓ Feeling is that it enhances safety of flight.
- ✓ Necessity of a/c id and intent information
- ✓ Self separation is likely to be possible in low density airspace.
- ✓ Reservations about feasibility of self separation in medium/high density airspace.
- ✓ Small steps with clear benefits advance implementation.
- ✓ Monitoring role of controller is untenable.



Items of uncertainty

- ✓ Workload and Situational Awareness implications of shared responsibility.
- ✓ Pilot taking responsibility of separation.



First steps

- ✓ To advance the research into development and deployment.
- ✓ Enhancement of procedures
 - In Trail Climb
 - “Visual” approaches to airfields with closely spaced parallel or converging runways.



Major Issues still to be addressed

- ✓ Responsibilities and legislation.
- ✓ Workload implications in the cockpit and on the ground.
- ✓ Overreliance on automation.
- ✓ Safety implications.
- ✓ Demonstrating the capacity gain.



Recommendations

- ✓ Continue FAA/Eurocontrol collaboration.
- ✓ Try to arrive at common standards.
- ✓ Form specific Joint Project Teams:
 - In Trail Climb
 - Visual Approaches
 - Rules of Flight on Self Separation.
- ✓ Start fundamental safety research
 - Measuring safety and setting a target level.
 - Proving the integrity of ASAS and GNSS.