



Airport Management Session

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Some Observations about the Airport Management Research in ATM2007



- Emphasis on:
 - Collaboration among the airport users
 - Methodologies, evaluation, and validation
- Four papers
- 35 attendees

Airport Management Paper Summary (1 of 2)



- Methodologies, Evaluation, and Validation
- Methodologies
 - For exploring equity in collaborative decision-making
 - Examination of efficient and equitable plan
 - Use of currency to help insure equity
 - For predicting airport failure states
 - Analysis of failure transitions in the past to predict future events
 - Application of a mathematical methodology based on transitional matrices

Airport Management Paper Summary (2 of 2)



- Evaluation of new tools and concept for airport operations
 - Field trials and simulations of European Airport Movement Management (EMMA)
 - Results indicate operational feasibility and improvements in safety and efficiency
- Validation of collaboration planner tool
 - Validation of Cooperative Local Resource Planner (CLOU) at Frankfurt Airport
 - CDM optimization strategies improved punctuality and reduced airborne waiting time

Some Conclusions from the Airport Management Session: Maturity of the Research



- Airport research is moving away from problem identification and into problem assessment
 - Creation and use of innovative methods and metrics
- Methods are varied and broad for airport management evaluation
 - Modeling, Real-time simulations, Field Tests
- Less emphasis upon airport tool development
 - More emphasis upon tool/procedure evaluation

Airport Management Session Trends?



- Airport Management Session has fewer papers this year than previous two seminars
 - 2003 - 8 papers: 3 European, 5 US
 - 2005 - 8 papers: 5 European, 3 US
 - 2007 - 4 papers: 4 European, None from US
- Airport Session has seen a reduction in US papers, leading to no papers this year
- European research in this area appears strong
- Question: Are we paying enough attention to Airport Research in the US?

Relationship of the Airport Management Papers to SESAR and NextGen



- SESAR and NextGen require significant **improvements in airport capacity** to solve the problem of the capacity bottleneck
 - Includes consideration of all-weather operations (discussed in the EMMA project)
- SESAR and NextGen both require **methods for airport assessment**
 - Requires new approaches and metrics (illustrated in some of our papers)
- SESAR and NextGen both discuss requirements for **more collaboration** among airport users to achieve capacity and safety improvements for the airport environment
 - All of our papers discuss and/or address collaboration