NEXTOR
(National Center of Excellence for Aviation Operations Research)
Research Symposium

March 6, 2008

FAA Auditorium
FAA Headquarters, 800 Independence Ave SW,Washington DC

PROGRAM

8:30 – 8:45:

Welcome: ***Michael Ball, U of Maryland*** and ***Vicki Cox, Vice-President, Operations Planning Services, FAA Air Traffic Organization***
Opening Remarks: ***Hank Krakowski, Chief Operating Officer, FAA Air Traffic Organization***

8:45 – 10:00:

Emerging Research Challenges

Chair: ***Mark Hansen, UC Berkeley***
John Hansman, MIT: Airline Industry Trends
Toni Trani, Virginia Tech: Demand Modeling for NEXTGEN
Arnie Barnett, MIT: Air Safety Tomorrow: NEXTGEN and Third-World Challenges

10:00 – 10:15: Break

10:15 – 11:45:

Airport Congestion Management

Chair: ***Lance Sherry, George Mason***
Michael Ball, U of Maryland: Overview of Congestion Management Issues and Alternatives
Frank Berardino, GRA, Inc.: Practical Market-Based Approaches
Andy Churchill, U of Maryland: Determining an Optimal Airport Slot Profile
Mark Hansen, UC Berkeley: Airport Congestion – Differentiating between Demand and Capacity Effects

11:45 – 1:00: Lunch

1:00 – 2:30:

Performance Modeling

Chair: Arnie Barnett, MIT

Lance Sherry, George Mason: Measuring Passenger Trip Delays

John Shortle, George Mason: Safety Modeling of Runway Operations

Jasenka Rakas, UC Berkeley: Infrastructure Reliability

Megan Smirti, UC Berkeley: Development of a Greenhouse Gas Emission Inventory: a Case Study of Aviation in the California Corridor

2:30 – 2:45: Break

2:45 – 4:00:

Air Traffic Flow Management

Chair: Michael Ball, U of Maryland

Alex Bayen, UC Berkeley & Bob Hoffman, Metron Aviation: Concepts and Models for NEXTGEN Air Traffic Flow Management

Dave Lovell, U of Maryland: Quantifying the Benefits of New Technologies for Reducing Trajectory Variability in NEXTGEN Aviation Systems

Norma Campos, MIT: Overview of Operational Inefficiencies and Opportunities for Improvement over the North Atlantic Airspace

NEXTOR Background

NEXTOR, the National Center of Excellence for Aviation Operations Research, is a Government-Academic-Industry alliance dedicated to the advancement of aviation research and technology. NEXTOR was founded in 1996 through the Federal Aviation Administration (FAA) centers of excellence program. Since its founding it has participated in a variety of research projects sponsored by the FAA, NASA, airport operators as well as private industry.

In collaboration with the FAA and its industry partners, NEXTOR looks to develop an understanding of how the National Airspace System (NAS) service providers and users will respond to alternative system architectures, operational concepts, investment strategies and finance mechanisms. The knowledge and capabilities gained from this government-sponsored research program provides critical information to executives and senior government officials on a host of issues ranging from near-term investment choices to long-term strategies. NEXTOR research also addresses the development of new system architectures and operational concepts and related decision support models and tools. Some of its research results have been incorporated into FAA systems and have led to improved NAS performance.

Through its knowledge exchange program, NEXTOR researchers, industry members, and government agents present state-of-the art research to the aviation community. The program offers two to three conferences and seminars per year on such subjects as NAS Infrastructure Management, Performance Metrics and the Economic and Social Value of Air Transportation.

In addition, the partnership seeks to increase the breath of aviation operations research knowledge through its education programs. More than 130 graduate students have participated in NEXTOR's research programs since the organization's birth in 1996. Short courses are taught by faculty members and are open to any FAA, federal government, or industry affiliate employee interested in air transportation systems analysis.

For more information go to www.nextor.org.