The NAS Operational Evolution Plan (OEP)

“7 Steps To Add Capacity”

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Agenda

• Today’s Problems
• The NAS Operational Evolution Plan
• Key Changes and Their Impact
• 7 Steps To Add Capacity
A) Widespread Delays Resulting from Local Problems

Result: 5-10 minute unplanned hold for 5 Newark arrivals affects an estimated 250 aircraft in 20 minutes
B) Congestion Due to En route Severe Weather

Reroute sends more traffic over ATL departure routes creating congestion - departures out of ATL, DFW, and IAH are restricted
LGA Connectivity by Airframes (12/22/00) (Top 10 Airlines Only)

- 34 Airports
  - 204 Flights
    - (144 Delayed)
    - 71%
  - LGA
    - First Leg: 238 Flights
      - (183 Delayed)
      - 77%
    - 37 Airports
      - Second Leg: 195 Flights
        - (135 Delayed)
        - 69%
- 74 Airports
  - Including LGA
    - (49 Flights, 36 Delayed)
    - (73%)
  - Third, Fourth, ... Legs: 376 Flights
    - (249 Delayed)
    - 66%
    - 62 Airports
      - Including LGA
        - (55 Flights, 38 Delayed) (69%)
All Flights on Itineraries through 8 Selected Airports
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Delayed Flights on “Good Day” 12/04/00
All Flights on Itineraries through 8 Selected Airports
Delayed Flights on “Delay Day” 12/22/00
Demography is Destiny!

Percent Change in Population by County: 1990 to 1999

- 50.0 to 159.7
- 25.0 to 49.9
- 10.0 to 24.9
- 0.0 to 9.9 (U.S. = 9.6)
- -58.7 to -0.1

Source: Population Estimates Program, U.S. Census Bureau
NAS Operational Evolution Plan

Linking Problems To Solutions

Version 2.0 to be Released in Late April

• 10 year Operationally Oriented view.

• Capacity and Flexibility

• Integrates Schedules and Resources across FAA Lines of business.

• Requires Airline, Users and Airports to coordinate actions and equipage.

• Identifies required research and challenges.
Managing En Route Congestion

- Area Navigation (RNAV)
- Airspace Redesign and Implementation of Domestic RVSM
- Free Flight Tools
- Collaborative Management of Resources
The Impact of Implementing RVSM
30-40% Reduction in Complexity
Adding Flexibility and Capacity for Traffic Growth
Increasing Arrival/Departure Throughput

- Area Navigation (RNAV) for terminal approaches
- Free Flight Tools
- ADS-B and Wake-vortex technology
- Surface situational awareness
- New runways and taxiways
The Impact of RNAV in Terminal Areas
Reduced Communications Workload, Enhanced Predictability
Conclusions - 7 Steps To Add Capacity

• Increase procedural efficiency by implementing RNAV routes and approaches. Accelerate transition to RVSM.
• Deploy ATC data link messages now.
• Adopt a strategic view of avionics equipage - we cannot operate the system effectively at the level of “the least common denominator.”
• Reach agreement on LAHSO use and required training.
• Improve collaboration and information sharing.
• Develop strategies for increased usage of underutilized airports and runways.
• Accelerate research and implementation of ADS-B and wake vortex technologies.