Briefing Overview

• Why use ATFM?
  – Benefits derived from Air Traffic Flow Management (ATFM) and the Collaborative Decision Making (CDM) process.

• Who is involved?
  – Air Traffic Organization
  – Customer
    • Civil
    • Military

• How is ATFM applied?
  – Planning and coordination
  – Automated tools and procedures
LGA Arrivals and Departures
BOS Arrival and Departures
TEB Arrival and Departures
Northeast Airports Close Up
All Traffic
Convective Weather
All Northeast Airports with Weather
Military Airspace
Air Traffic Flow Management

- **Mission** - balance air traffic demand with system capacity to ensure a safe, efficient utilization of the National Airspace System.

- Appropriate application of traffic management initiatives provides operational benefits:
  - Minimizes delay and congestion
  - Increases throughput
  - Increases system safety
  - Lowers cost through fuel savings
  - Provides scheduling predictability
Air Traffic Flow Management

• ATFM supports the implementation of new technology and procedures that enhance airspace capacity such as:
  • RNAV
  • RNP
  • RVSM
  • CAATS
  • Shanwick System
  • A-380 construction
  • ERAM
Collaborative Decision Making

• The Traffic Flow Management operational philosophy, technologies, and procedures that enable the Federal Aviation Administration and the aviation industry to collaboratively manage operational constraints in a manner that balances operational efficiency with aviation safety.

• Collaborative decision making has become an integral part of our ATFM process. The success of our system relies on this collaboration
Benefit to the Customers

- Customers participate in the daily management of the NAS through:
  - Daily weather assessment
  - Common situation display
  - Planning Telcons – conducted every two hours
  - Representatives located at the System Command Center [ATA, NBAA, Military Cell]
  - Direct access to the Tactical Customer Advocate
  - Access to FAA management through daily customer telecon
  - Participate in regular system improvement meetings
The Military as a Customer

• Military Air Traffic Services Cell
  – Housed within the System Command Center
  – Mission - To coordinate all priority military aircraft movement and airspace issues during times of tension, warfare, natural disasters or civil unrest.
  – Warfare Support
  – Deployment of forces
  – Sensitive, specialized, or classified mission coordination
  – Military training exercise support
  – Natural or environmental disaster assistance
  – Civil exercise collaboration involving military participation
The Customer’s Role

• Customer participation through direct representation within the System Command Center via
  – National Business Aviation Association
  – Air transport Association
  – Military Cell

• Airline Operations Center participation in Planning Teleconferences conducted every 2 hours

• Participate in localized teleconferences directly with Tower, TRACON, Centers, and Command Center during establishment of traffic management initiatives

• Direct access to Tactical Customer Advocate for extraordinary issues

• Common shared situational data for planning purposes
Who’s Involved

- Terminal/TRACON
- Enroute
- Command Center
- Director Tactical Operations
- Customers
  - Civil
  - Military
Approx. 5,000 Airports
125 FAA staffed    235 Federal Contract
Approx. 170 TRACONs
Air Traffic Hierarchy

Tower – TRACON – Center – ATCSCC - DTO
Air Traffic Organizational Structure

• Air Traffic Control System Command Center
  – National Operations Manager
  – Operations Planning Team
  – Traffic Management Coordinators/Severe Weather Specialists
  – Tactical Customer Advocate
  – Central Altitude Reservation Facility

• All 21 Air Route Traffic Control Centers have Traffic Management Units

• All major TRACONs and Towers have Traffic Management Units

• Manager, Tactical Operations – 5 regional representatives.
Air Traffic Control System Command Center (ATCSCCC)
Applying ATFM

- Planning
- Coordination
- Tools
Applying ATFM Planning and Coordination

- Day begins with collaborative discussion on forecasted weather impacts to the system, with continuous review throughout the day.
- Operations Plan is developed with customers, field facilities and the System Command Center.
- Plan is revisited and updated every 2 hours throughout the day.
- Specific airport and regional initiatives are managed by Traffic Management Coordinators and field facility experts in collaboration with the customers.
- Capacity and constraint data is shared via automated means with all parties.
Collaborative Convective Forecast Product
Common Situation Display
Enhanced Traffic Management System (ETMS)
Enhanced Traffic Management System (ETMS)
Flight Schedule Monitor
Flow Evaluation Area/Flow Constrained Area

• FEA – Geographic area identified as being impacted by weather or other constraint, is shared with customers and FAA facilities to allow voluntary rerouting away from impacted area.
• FCA – A formalized FEA which requires positive traffic management initiatives to meter traffic through constrained area

• Initiatives applied may be
  – Miles-in-trail or minutes-in-trail.
  – Capping altitude below impacted area
  – Tunneling through designated corridors
  – Ground delay programs and/or ground stops
Flow Evaluation Area
National Playbook

Air Traffic Control System
Command Center

National Severe Weather
Playbook

DFW BYP 1

Impact Area or Flow: DFW BYP STAR
Facilities Included: DFW EME ZHE CDL ZFW

Instructions: Remove any ADE/ONE traffic and internal departures destined the DFW Terminal Area via the following routes. Substitute other destination in place of DFW if applicable.
Coded Departure Routes (CDRs)
## Ground Stops/Ground Delay Programs

**ATCSCC Advisory**

**ATCSCC ADVZY 109 LGA/ZNY 07/14/2004 CDM PROPOSED GROUND DELAY PROGRAM**

**MESSAGE:**
- AIRPORT: LGA
- ARR. TIME: 1639Z
- ARRIVALS ESTIMATED FUR: 14/100411U - 15/0109Z
- ANTICIPATED PROGRAM DURATION: 37
- FLIGHTS INCLUDED: ALL CONTIGUOUS US DEPARTURES
- SCHEDULE: (HORNET+CEC AP) ZAI ZAM ZKE ZPB ZPH ZIQ ZQX ZNF ZHW ZEP ZRH ZTL CYC CYR CYY CANADIAN AIRPORTS INCLUDED: CYC CYR CYY RELAY ASSIGNMENT TABLE APPLIES TO: ZAI
- ANTICIPATED MAXIMUM DELAY: 345
- ANTICIPATED AVERAGE DELAY: 202
- REASON: WEATHER, THUNDERSTORMS
- REMARKS: REDUCED AAR TO 27 AND EXTENSION
- USER UPDATES MUST BE RECEIVED BY: 1900Z

**EFFECTIVE TIME:** 141643 - 141759

**SIGNATURE:** 04/07/14 16:44

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Airspace Flow Program

- New tool delivered in spring 2006
- Combines FSM flight data, Ground Delay Program algorithms, and FEA/FCA technology to target specific NAS element such as
  - Volume of enroute airspace
  - Specific airway
  - Airport
  - Specified fix
- More precisely targets impacted enroute airspace as compared to GDP technology
**Federal Aviation Administration**

**Airspace Flow Program**

- **FCAA08** is defined by the western boundary of ZDC and a line across central Virginia.

- **Altitude Filters**: 120 – 600
- **Arrival Filters**: ZNY, ZBW, ZDC
- **Departure Filters**: None

- **Likely weather for use**: Weather in the Ohio Valley region or in ZDC airspace.

- **Weather Triggers**: Lines and popcorn storms. CCFP predicted intensity levels of greater than 50% with High Confidence.

### NESP Rate Guidelines

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European Traffic
Pacific Traffic
Mexico and Caribbean Traffic
Polar Route
International ETMS Data Exchange

• Current Agreements
  – Mexico
  – Canada
  – United Kingdom
  – COCESNA
  – Chile
  – Columbia

• In Progress
  – Eurocontrol
  – Panama
  – Dominican Republic

• Future Expansion
  – Brazil
  – Japan
ATCSCC Web Site

Internet
http://www.fly.faa.gov