INTERNATIONAL CIVIL AVIATION ORGANIZATION

A United Nations Specialized Agency

An Overview of ATCSCC and ATFM Operations

Presented to: ICAO Workshop on Regional Implementation on PBN Airspace Redesign

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What is Traffic Management?

- Traffic Management is the craft of managing the flow of air traffic based on capacity and demand.

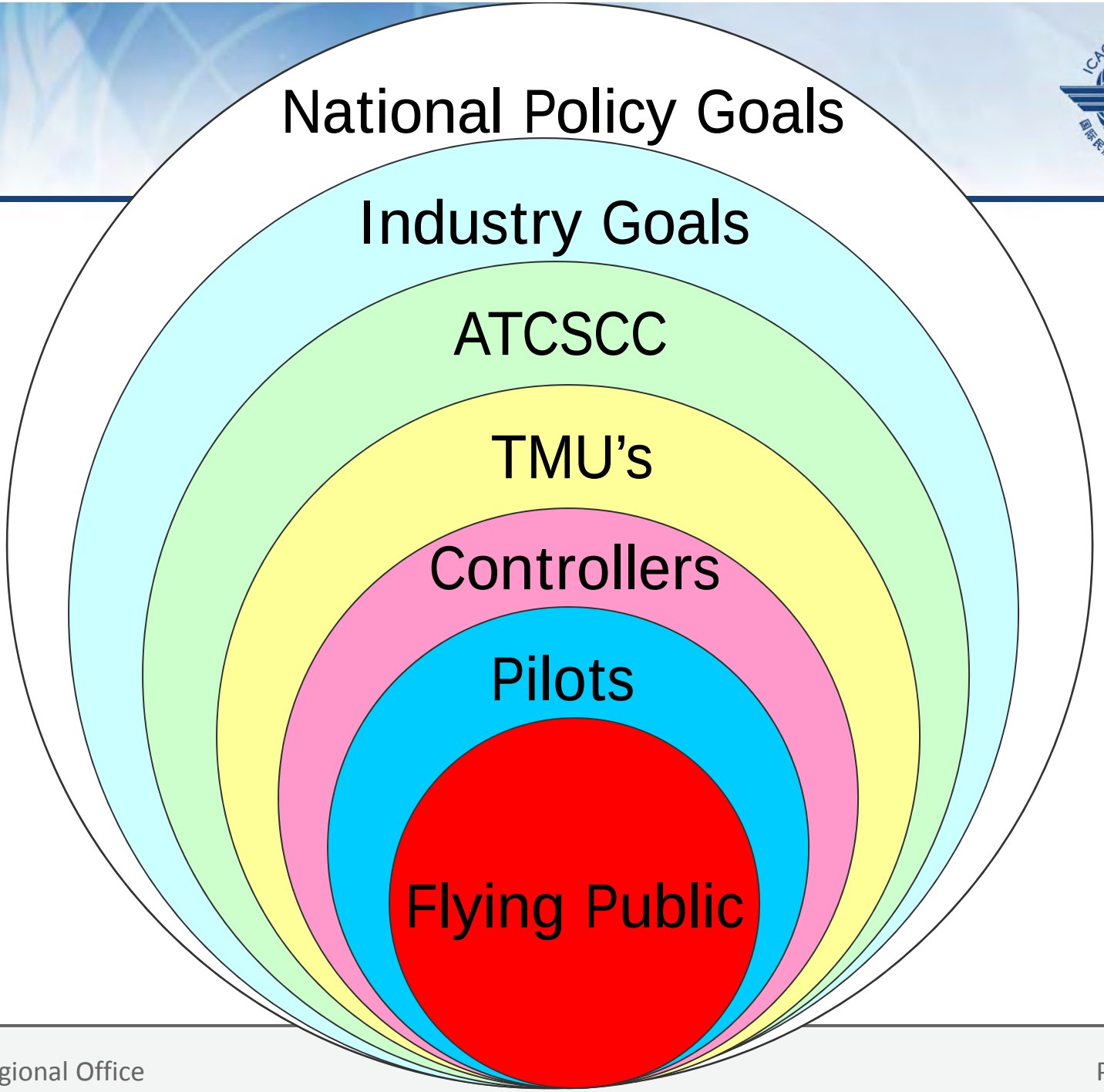
Systems Approach

- A management approach that considers the impact of individual actions on the whole.
- Considers impacts and focus on ensuring equity in service delivery
- A system approach – collaborating with stakeholders.
- Stakeholders consider costs and benefit to the system

Collaborative Decision Making (CDM)

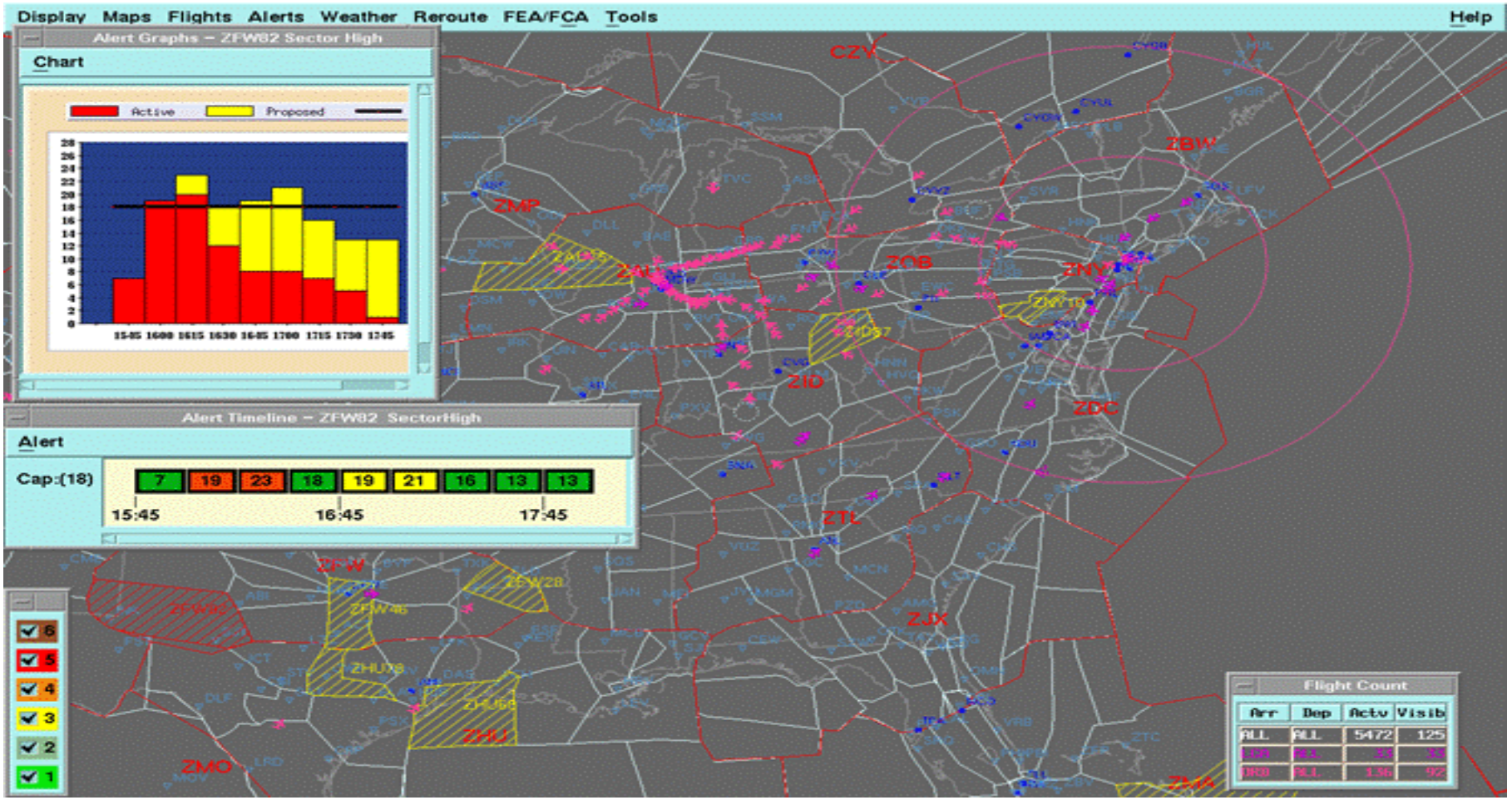
CDM is an:

- Operational philosophy and the associated technologies that enables Air Navigation Service providers and aviation industry to respond collaboratively to real-time operational constraints in the National Airspace System


National Policy Goals
Industry Goals
ATCSCC
TMU's
Controllers
Pilots
Flying Public

ATCSCC Operational Units

Enhanced Traffic Management System (ETMS)



ATFM Mission:

Balance air traffic demand with system capacity to ensure system efficiency of the Overall Airspace System

FAA
Air Traffic Organization

Phases of a Commercial Flight

From the beginning of an IFR flight until the end, Traffic Flow Management has a role to play

Traffic Flow Management Initiatives

Miles-in-trail (MIT)

Ground Delay Program (GDP)

Airspace Flow Program (AFP)

Ground Stop (GS)

Miles-in-Trail (MIT)

- Miles-in-trail describes the number of miles required between aircraft departing an airport, over a fix, at an altitude, thru a sector, or route specific.

- MITs are used to apportion traffic into a manageable flow, as well as provide space for additional traffic to enter the flow.

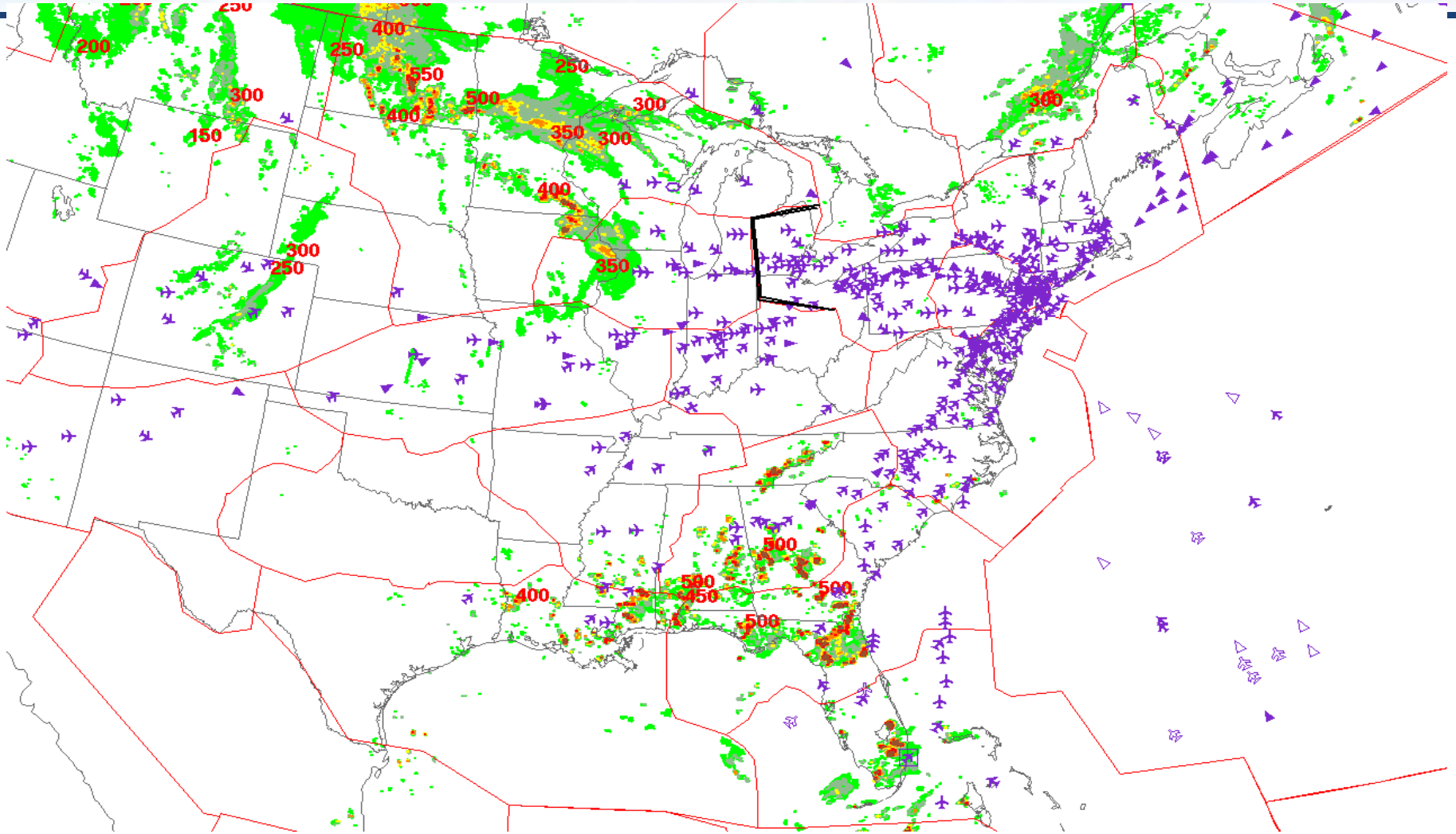
Ground Delay Program GDP

- A GDP -- aircraft are delayed at departure point to manage demand at their destination.
- Flights are assigned departure times
- GDP implemented at airports where capacity has been reduced or when demand exceeds capacity for a sustained period.
- The purpose of the program is to limit airborne holding.

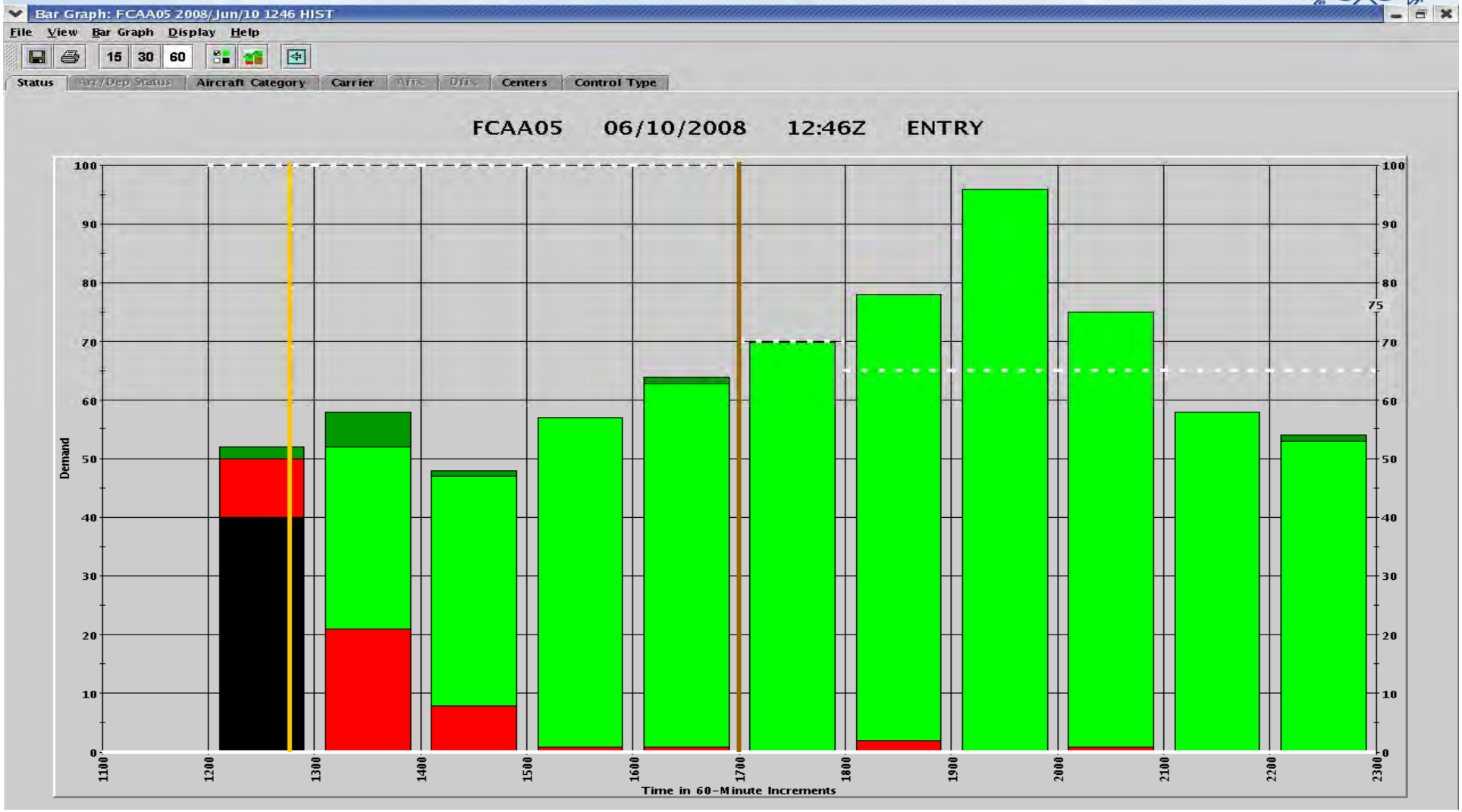
Airspace Flow Programs (AFP's)

- AFP's are like GDP's in the Air.
- Provides enhanced en route traffic management during severe weather events.
- An AFP develops a real time list of flights that are filed into a constrained area and distributes controlled departure times to meter the demand through the area.

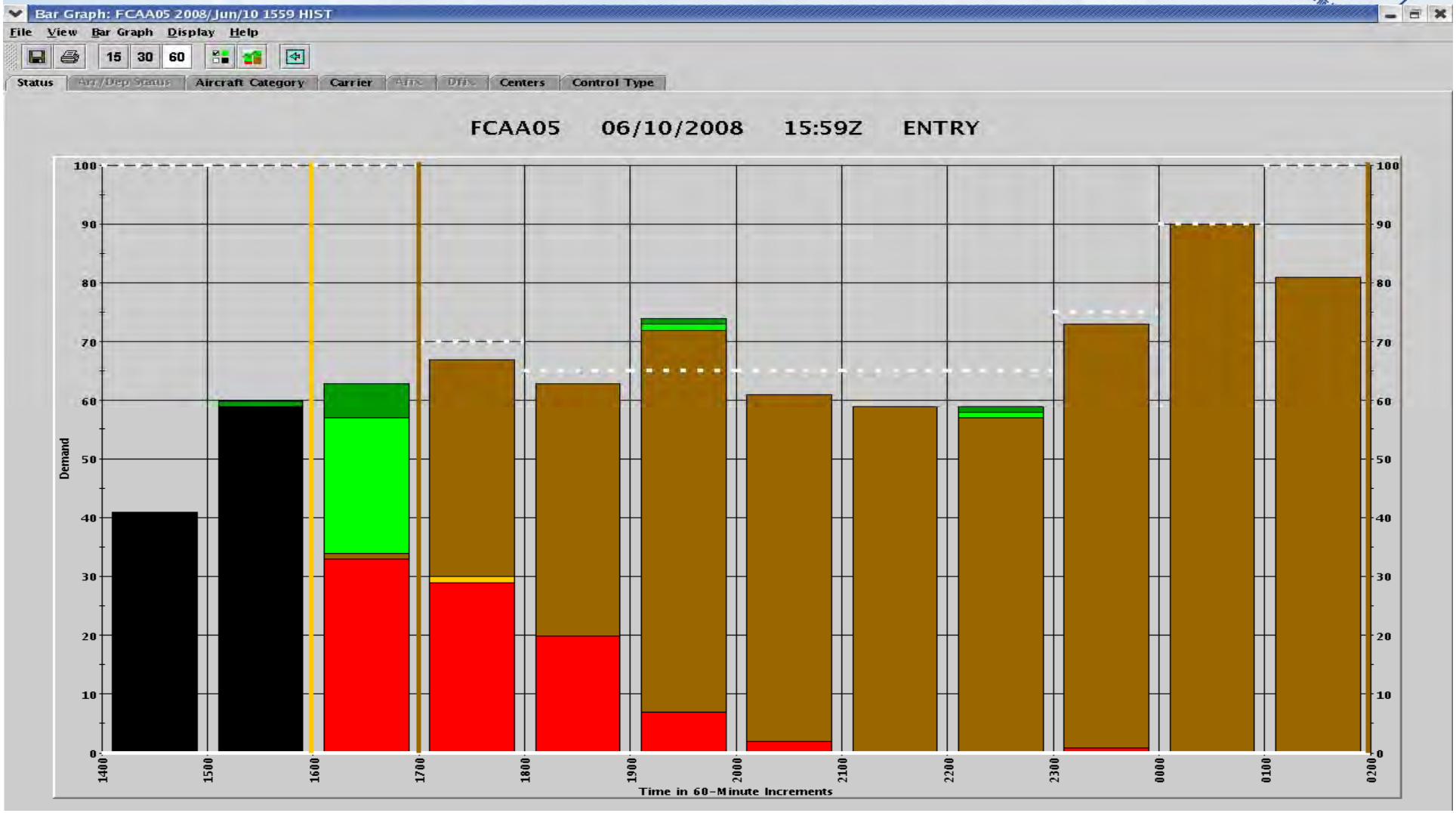
Airspace Flow Program (AFP)



AFP Eastbound Demand



AFP Eastbound Demand



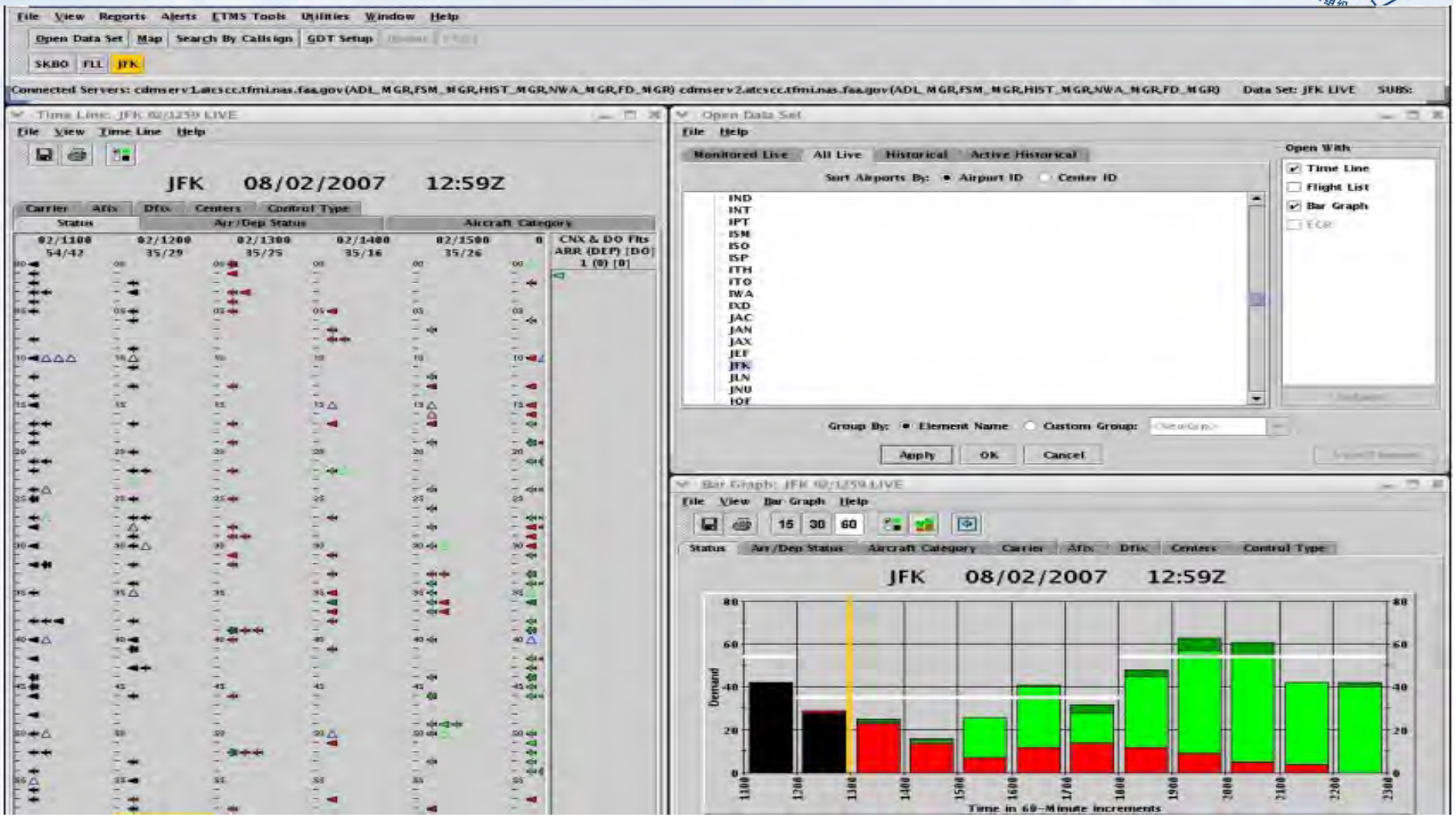
Ground Stops (GS)

- Requires aircraft to remain on the ground.
- Occur with little or no warning.
- Used in severely reduced capacity situations (weather) or to preclude sector/center reaching near saturation levels or airport grid lock.

Ground Stops (GS)

- When routings are unavailable due to severe weather.
- When routings are unavailable due to catastrophic events.
- NOTE: Helicopters are exempt from ground stops based on weather unless specifically included when requesting the ground stop.

Flight Schedule Monitor (FSM)



FAA National Playbook (pre-coordinated routes)

- Original concept: summer 1999
- First use: spring 2000
- Purpose:
  - to enhance communication, and
  - promote common situational awareness between the ATCSCC, FAA field facilities, and customer community

National Playbook

Playbook
Table Of Contents

National PlayBook Menu
- PlayBook
  - Change for Jul 7, 2005
  - Airports
    - ATL ERLIN-RMG
    - ATL HONIE-LGC
    - BOS ORW
    - BOS ORW-SCUPP
    - CVG CINCE 1
    - CVG CINCE 2
    - CVG EAST
    - CVG MOSEY
    - CVG SWEED 1
    - CVG SWEED 2
    - CVG TARNE
    - DEN OBH
    - DEN ONL
    - DFW BYP 1
    - DFW BYP 2
    - DFW CQY
    - DFW EAST 1
    - DFW EAST 2
    - DFW JEN
    - DFW UKW
    - DFW WEST
    - DTW CETUS
    - DTW EAST
    - DTW MIZAR
    - DTW SPICA
    - IAD MULRR 1
    - IAD MULRR 2
    - IAD MULRR 3

Air Traffic Control System

Command Center

National Severe Weather

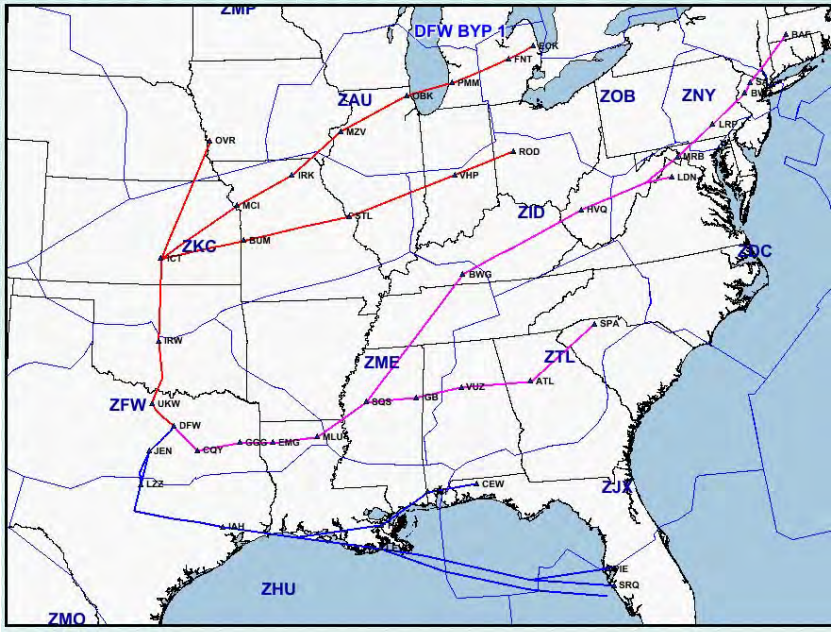
Playbook

DFW BYP 1

Impacted Area or Flow: DFW BYP STAR

Facilities Included: ZFW/ZME/ZID/ZDC/ZNY/ZBW/CZY/ZTL/ZHU/ZJX/ZMA/ZKC/ZAU/ZOB/ZMP

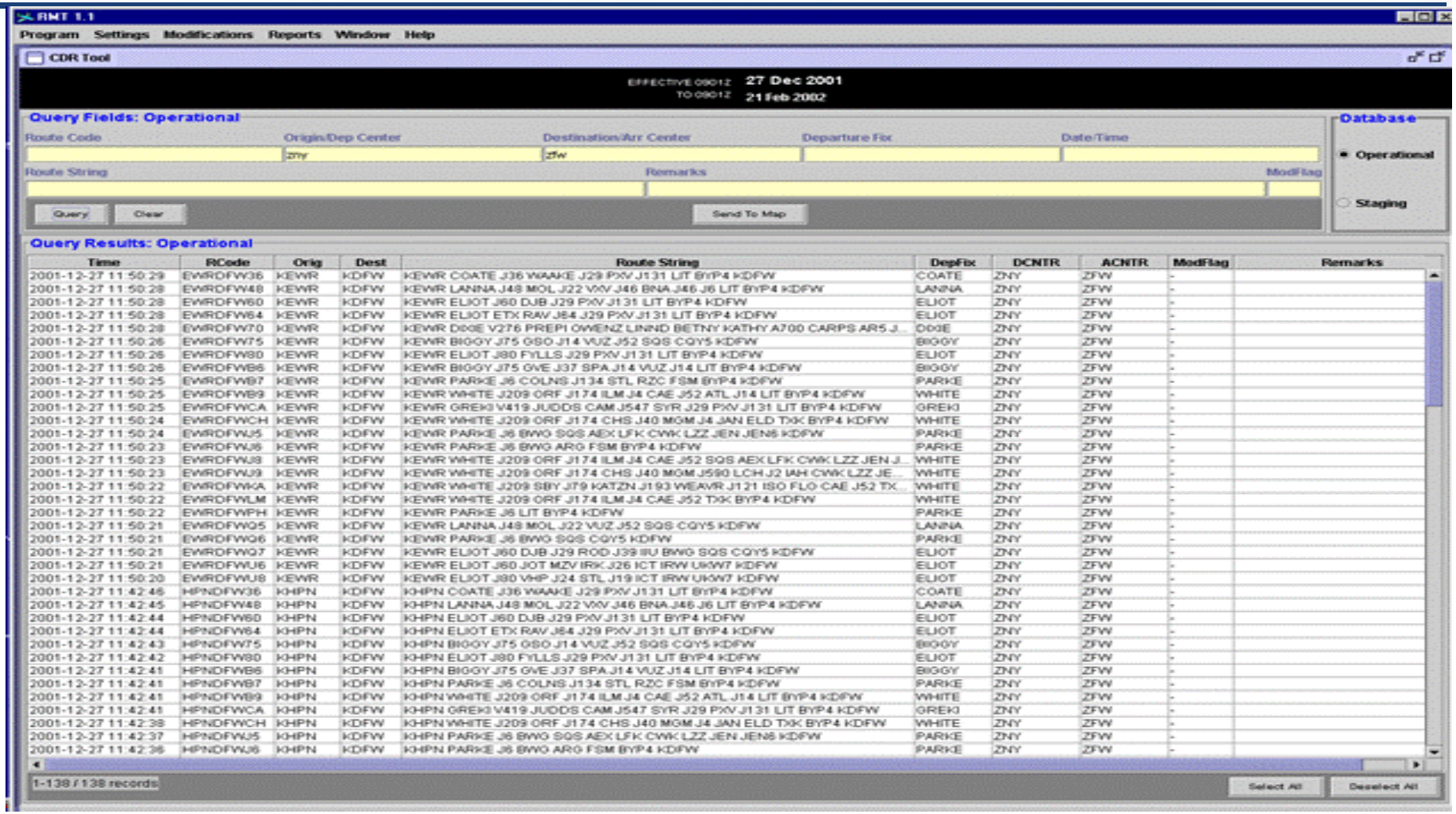
Instructions: REROUTE ANY AIRBORNE TRAFFIC AND INTERNAL DEPARTURES DESTINED THE DFW TERMINAL AREA VIA THE FOLLOWING ROUTES. SUBSTITUTE OTHER DESTINATION IN PLACE OF DFW IF APPLICABLE



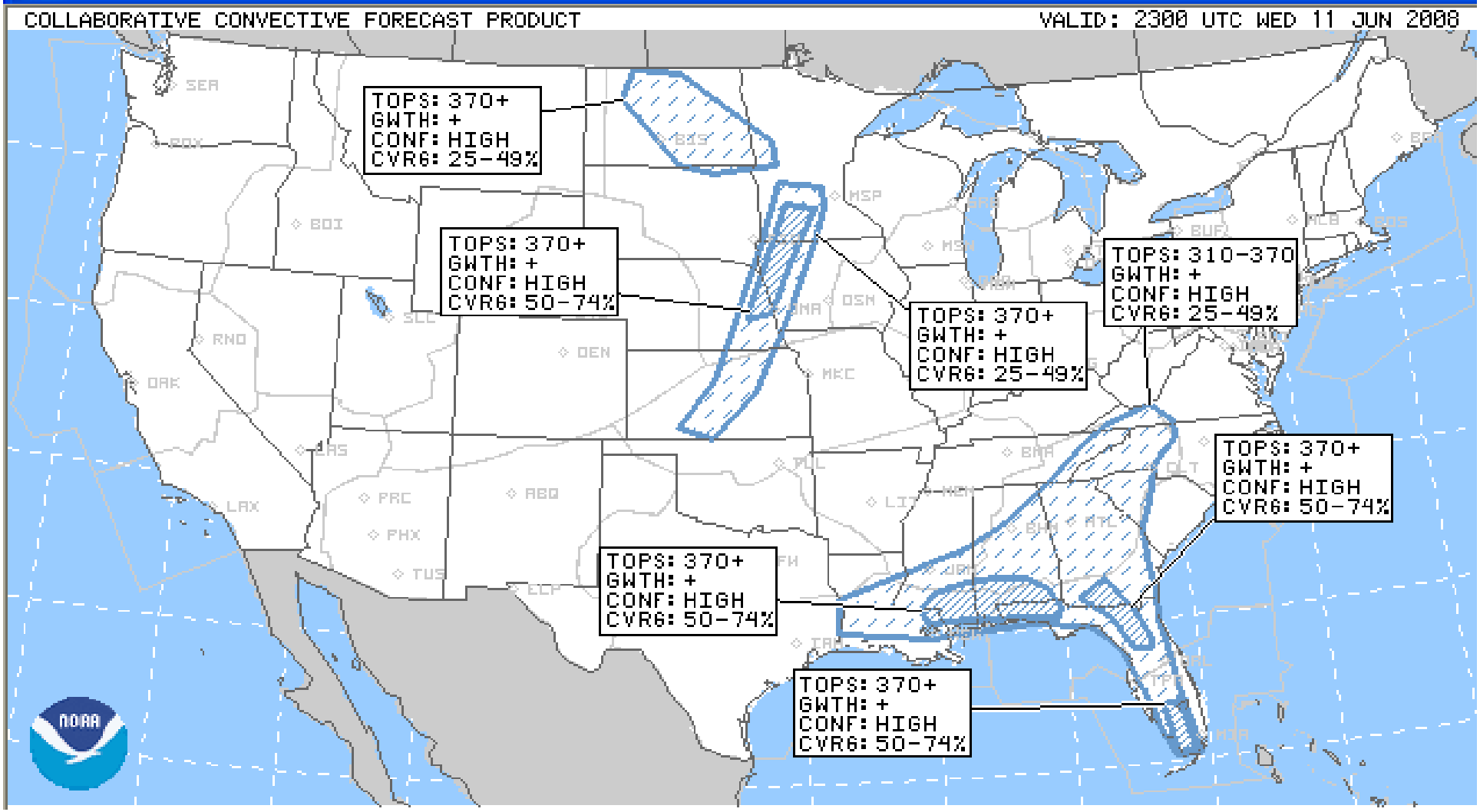
EXAMPLE: ORD ARRIVALS

GRAPHIC: ORD OXI-ROYKO

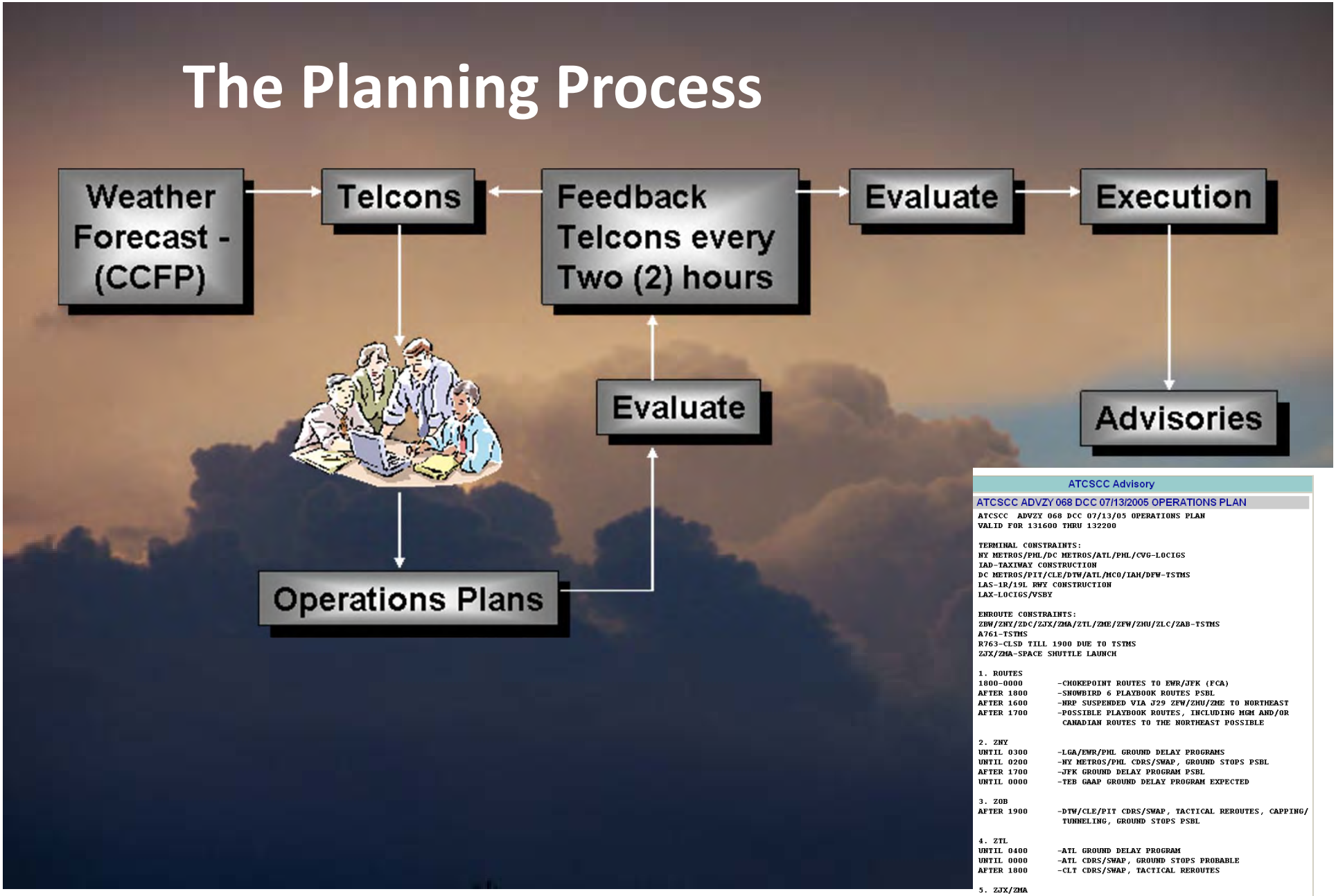
Coded Departure Routes (CDRs)



Weather Products: CCFP



The Planning Process



ATCSCC Advisory

ATCSCC ADVZY 068 DCC 07/13/2005 OPERATIONS PLAN

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ATCSCC  ADVZY 068 DCC 07/13/05 OPERATIONS PLAN
VALID FOR 131600 THRU 132200

TERMINAL CONSTRAINTS:
NY METROS/PHL/DC METROS/ATL/PHL/CVG-LOCIGS
IAD-TAXIWAY CONSTRUCTION
DC METROS/PIT/CLE/DTW/ATL/MCO/IAH/DFW-TSTMS
LAS-1R/19L RWY CONSTRUCTION
LAX-LOCIGS/VSBY

ENROUTE CONSTRAINTS:
ZBW/ZNY/ZDC/ZJX/ZMA/ZTL/ZME/ZFW/ZHU/ZLC/ZAB-TSTMS
A761-TSTMS
R763-CLSD TILL 1900 DUE TO TSTMS
ZJX/ZMA-SPACE SHUTTLE LAUNCH

1. ROUTES
1800-0000       -CHOKEPOINT ROUTES TO EWR/JFK (FCA)
AFTER 1800      -SNOWBIRD 6 PLAYBOOK ROUTES PSBL
AFTER 1600      -NRP SUSPENDED VIA J29 ZFW/ZHU/ZME TO NORTHEAST
AFTER 1700      -POSSIBLE PLAYBOOK ROUTES, INCLUDING MGM AND/OR
                 CANADIAN ROUTES TO THE NORTHEAST POSSIBLE

2. ZNY
UNTIL 0300      -LGA/EWR/PHL GROUND DELAY PROGRAMS
UNTIL 0200      -NY METROS/PHL CDRS/SWAP, GROUND STOPS PSBL
AFTER 1700      -JFK GROUND DELAY PROGRAM PSBL
UNTIL 0000      -TEB GAAP GROUND DELAY PROGRAM EXPECTED

3. ZOB
AFTER 1900      -DTW/CLE/PIT CDRS/SWAP, TACTICAL REROUTES, CAPPING/
                 TUNNELING, GROUND STOPS PSBL

4. ZTL
UNTIL 0400      -ATL GROUND DELAY PROGRAM
UNTIL 0000      -ATL CDRS/SWAP, GROUND STOPS PROBABLE
AFTER 1800      -CLT CDRS/SWAP, TACTICAL REROUTES

5. ZJX/ZMA
UNTIL 2300      -TACTICAL REROUTES, CAPPING/TUNNELING

*** SUBMIT NEW OPERATIONS PLAN AGENDA ITEMS VIA OIS PAGE ***

NEXT PLANNING TELCON: 131715Z
PARTICIPATION REQUIRED BY: ALL CENTERS/N90
131545-131759
05/07/13 15:45  FSA.//lxstn08a
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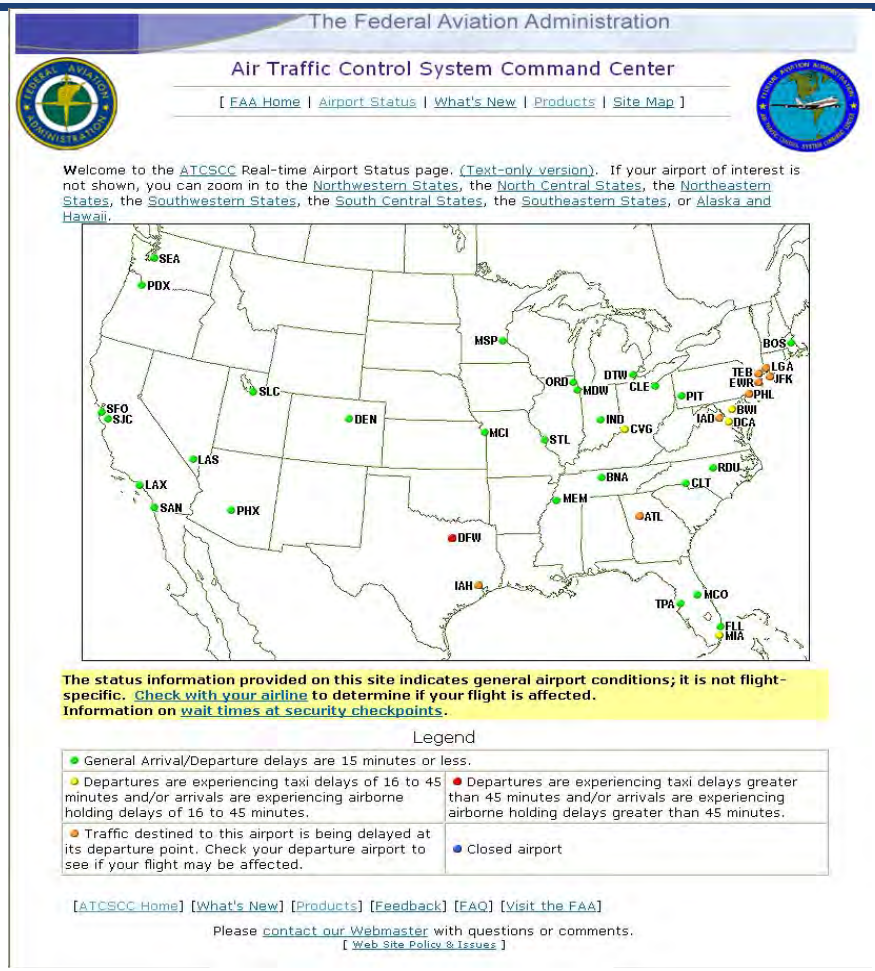
ATCSCC Web Site



The Federal Aviation Administration

Air Traffic Control System Command Center

[FAA Home | Airport Status | What's New | Products | Site Map]

Welcome to the ATCSCC Real-time Airport Status page. (Text-only version). If your airport of interest is not shown, you can zoom in to the Northwestern States, the North Central States, the Northeastern States, the Southwestern States, the South Central States, the Southeastern States, or Alaska and Hawaii.

The status information provided on this site indicates general airport conditions; it is not flight-specific. Check with your airline to determine if your flight is affected.
Information on wait times at security checkpoints.

Legend

General Arrival/Departure delays are 15 minutes or less.	
Departures are experiencing taxi delays of 16 to 45 minutes and/or arrivals are experiencing airborne holding delays of 16 to 45 minutes.	Departures are experiencing taxi delays greater than 45 minutes and/or arrivals are experiencing airborne holding delays greater than 45 minutes.
Traffic destined to this airport is being delayed at its departure point. Check your departure airport to see if your flight may be affected.	Closed airport

[ATCSCC Home] [What's New] [Products] [Feedback] [FAQ] [Visit the FAA]

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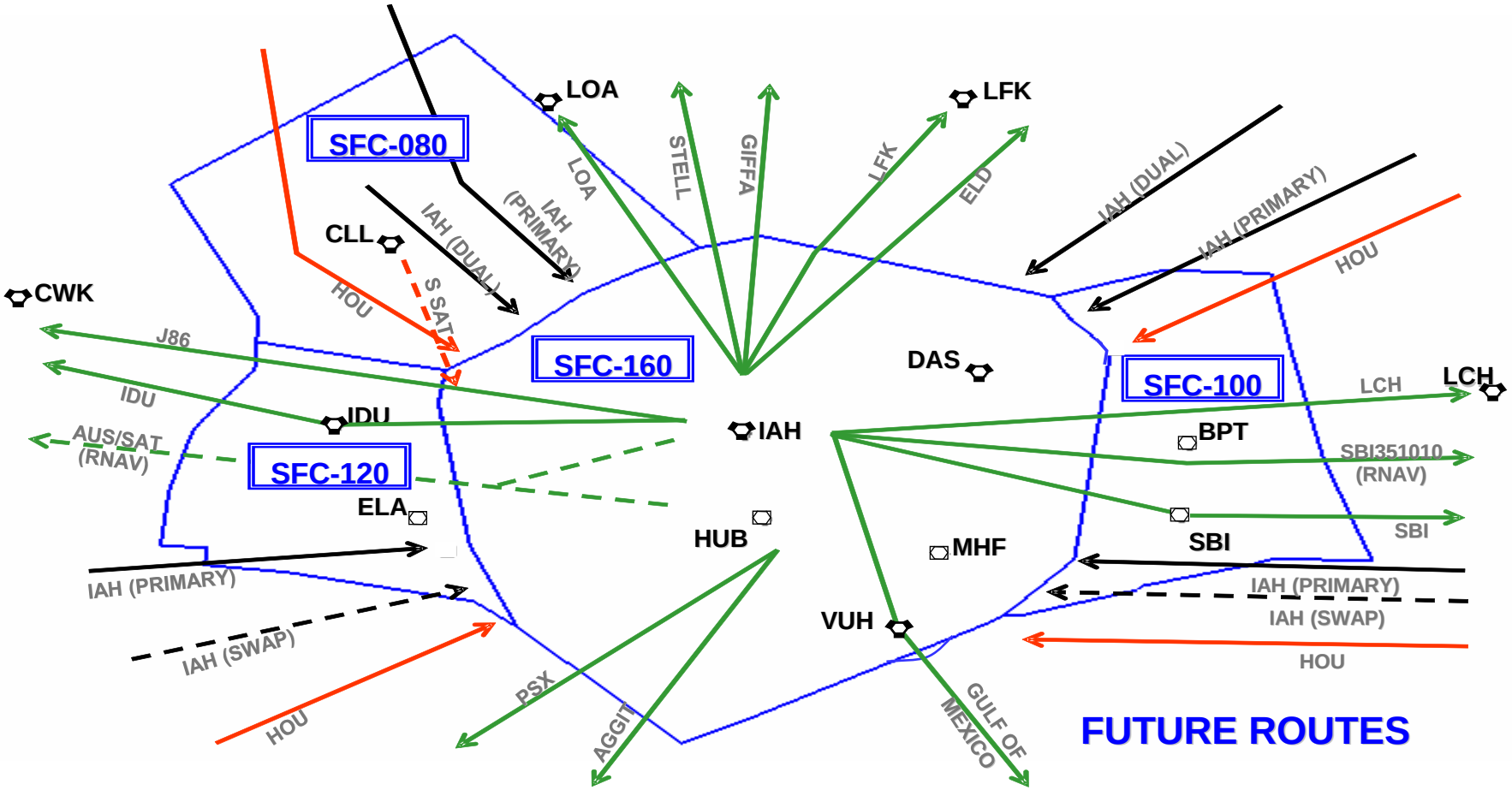
[Web Site Policy & Issues]

Example of Approach Routes



Without international rules air travel would be in chaos.

North American Central American and Caribbean (NACC) Office MexicoCity
South American (SAM) Office Lima
ICAO Headquarters Montreal
Western and Central African (WACAF) Office Dakar
European and North Atlantic (EUR/NAT) Office Paris
Middle East (MID) Office Cairo
Eastern and Southern African (ESAF) Office Nairobi
Asia and Pacific (APAC) Office Bangkok
Thank You
www.icao.int/nacc