Next Steps Toward the Regional Implementation of Globally Harmonized ATFM

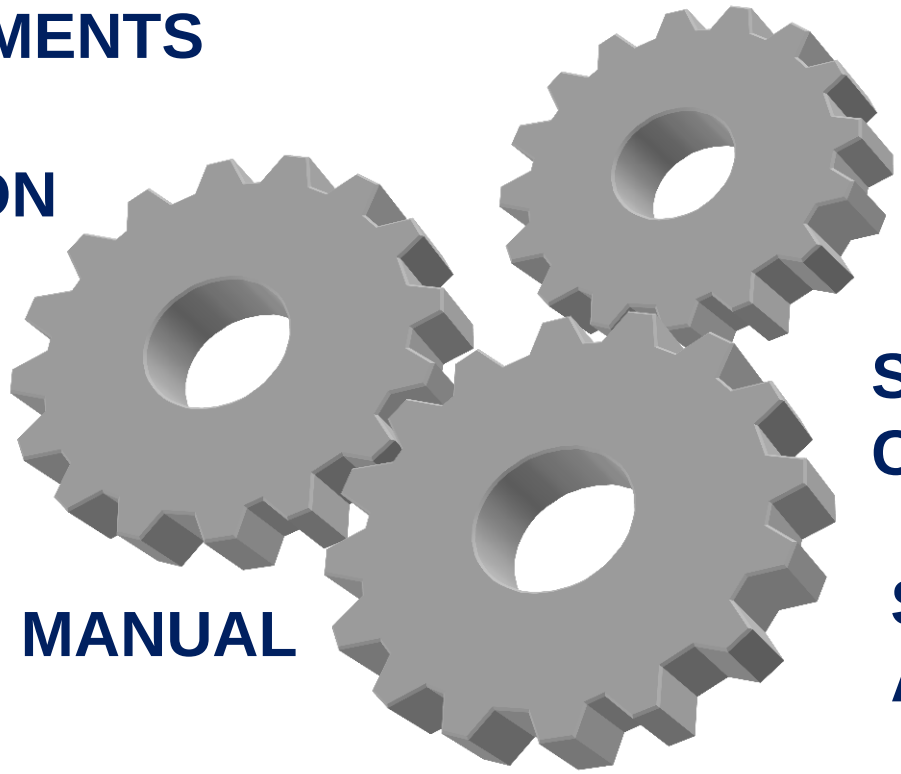
4-6 November 2014, Cancún, México

CHAMPION

EVALUATION AND ADJUSTMENTS

CDM PROCESS

IMPLEMENTATION



AIRPORT CAPACITY

ATFM TRAINING

SECTOR CAPACITY

ATFM PROCEDURES MANUAL

SITUATIONAL AWARENESS

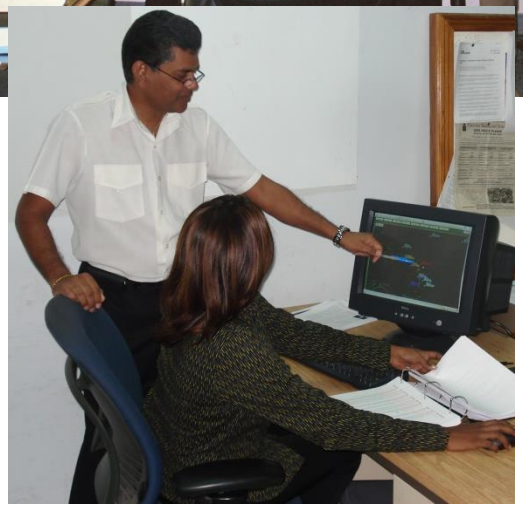
ATFM STRUCTURE

ATFM TOOLS

ATFM COMMUNICATION

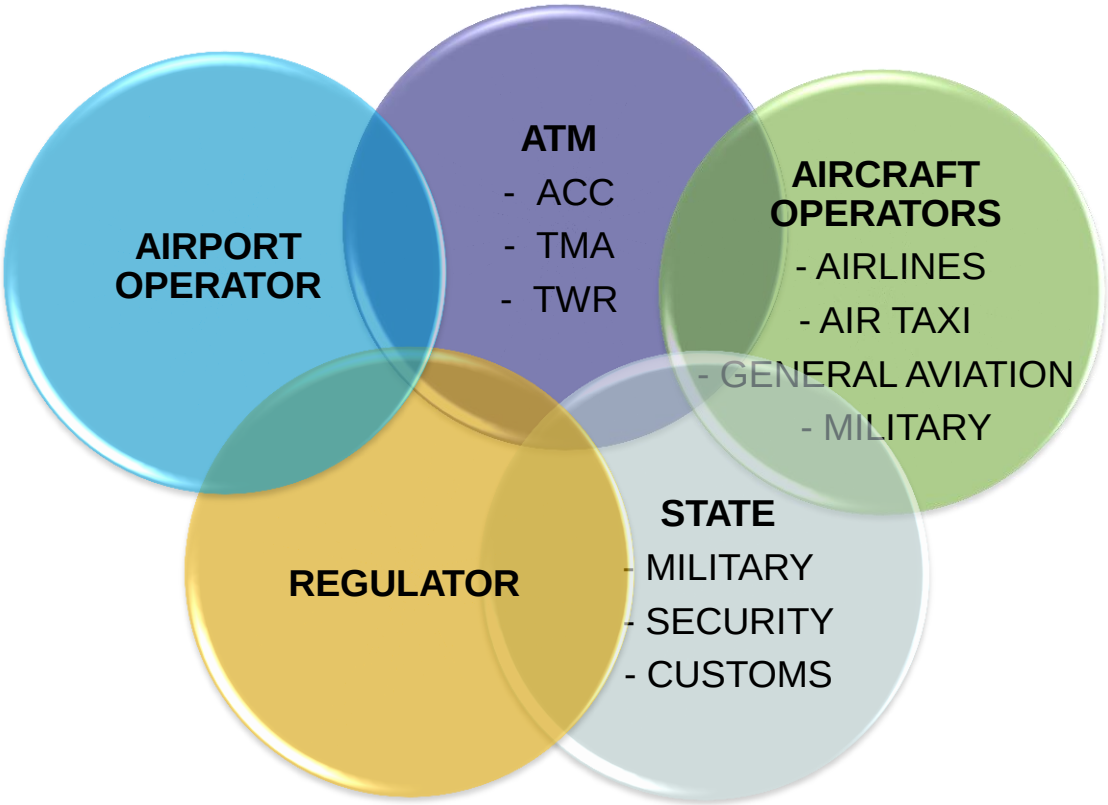
Start where you are !

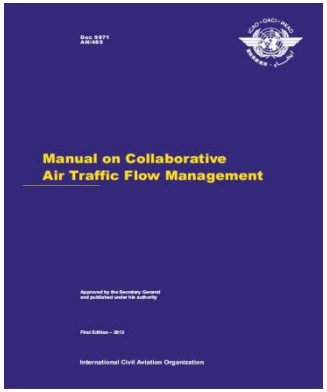
- Identify your ATFM project champion and leader
- Establish the objectives, project management plan, and oversight of your ATFM process



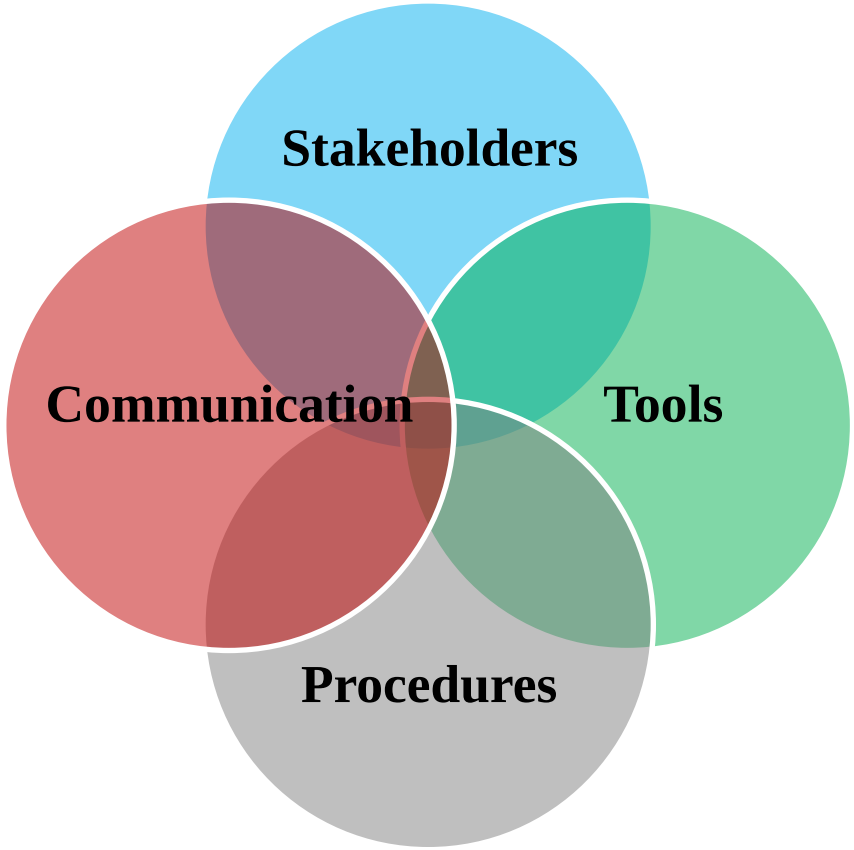

CGNA

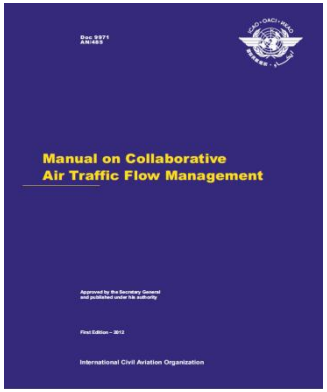
- Identify and brief the key stakeholders





- Then define the operating process: CDM



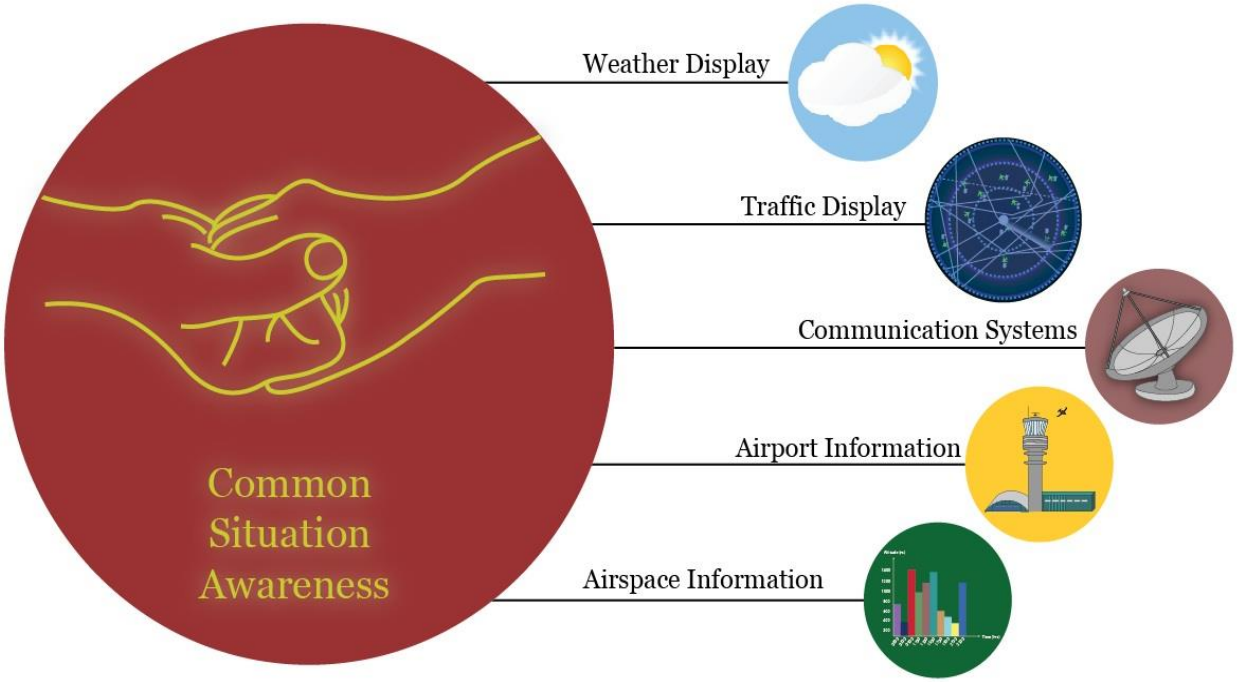


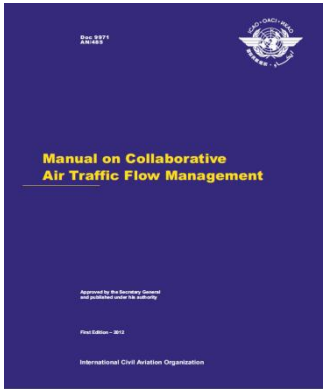
- Develop … or adopt … and apply a methodology to determine:
  - Airport capacity
    - Arrival rate
    - Departure rate
  - Sector capacity
    - Sector throughput

- **If you can measure it, you can manage it**

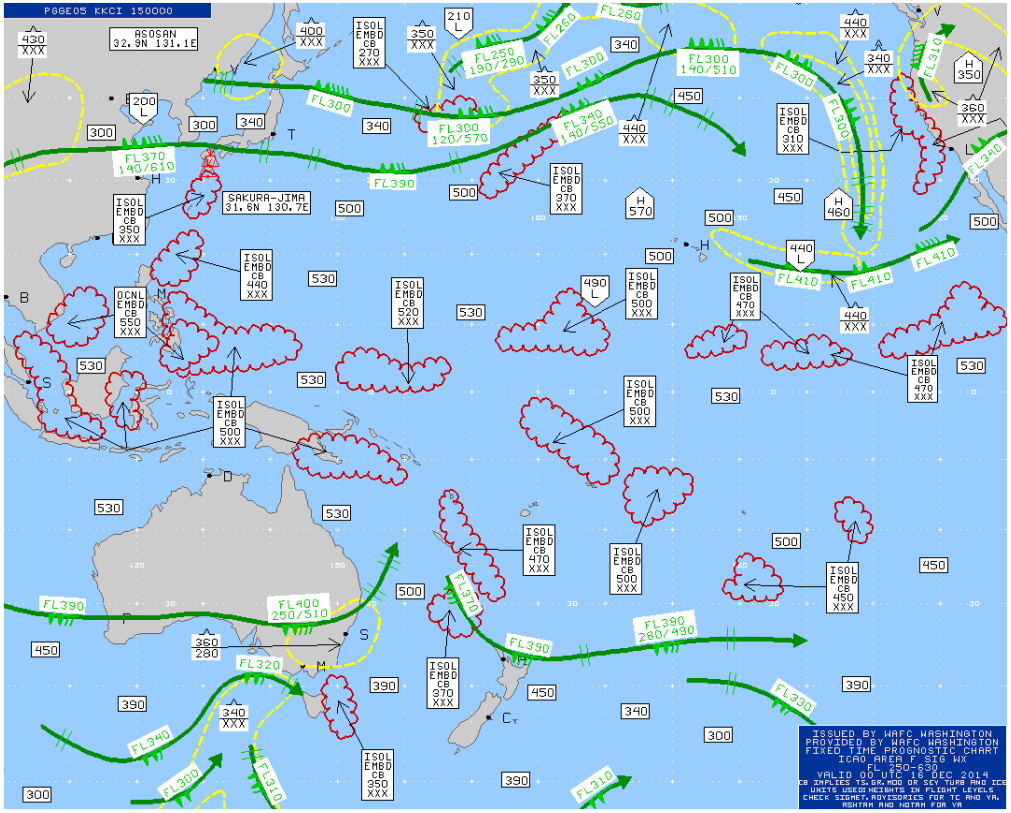
Then define the elements of:

- Common Situation Awareness



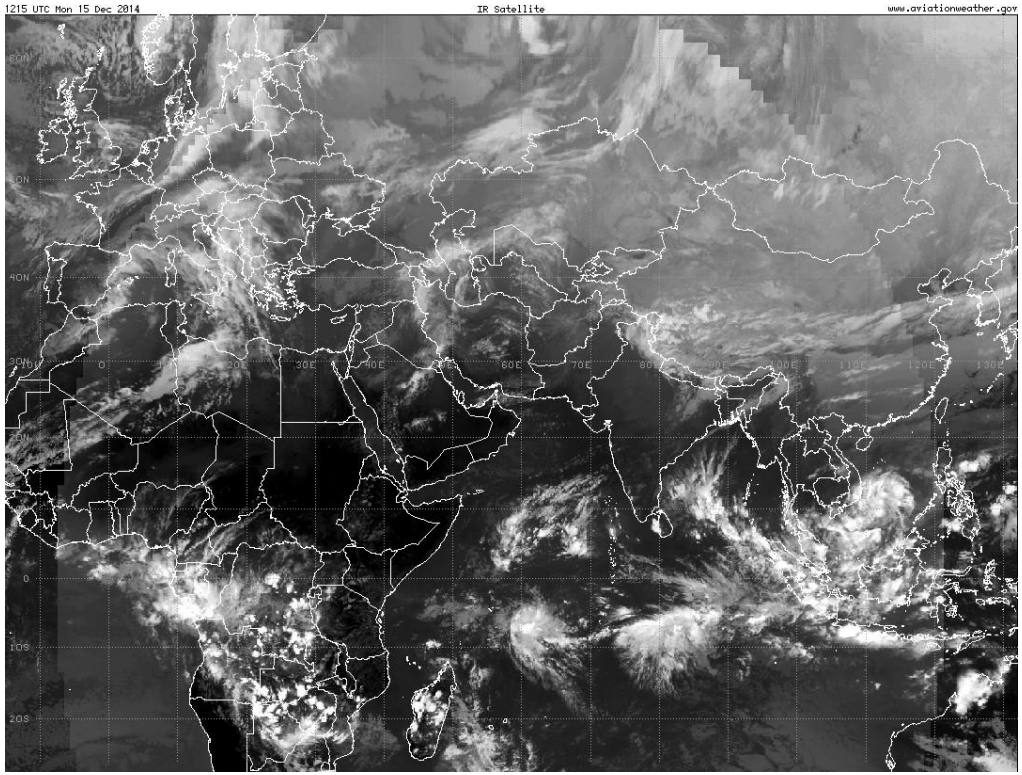


Weather information



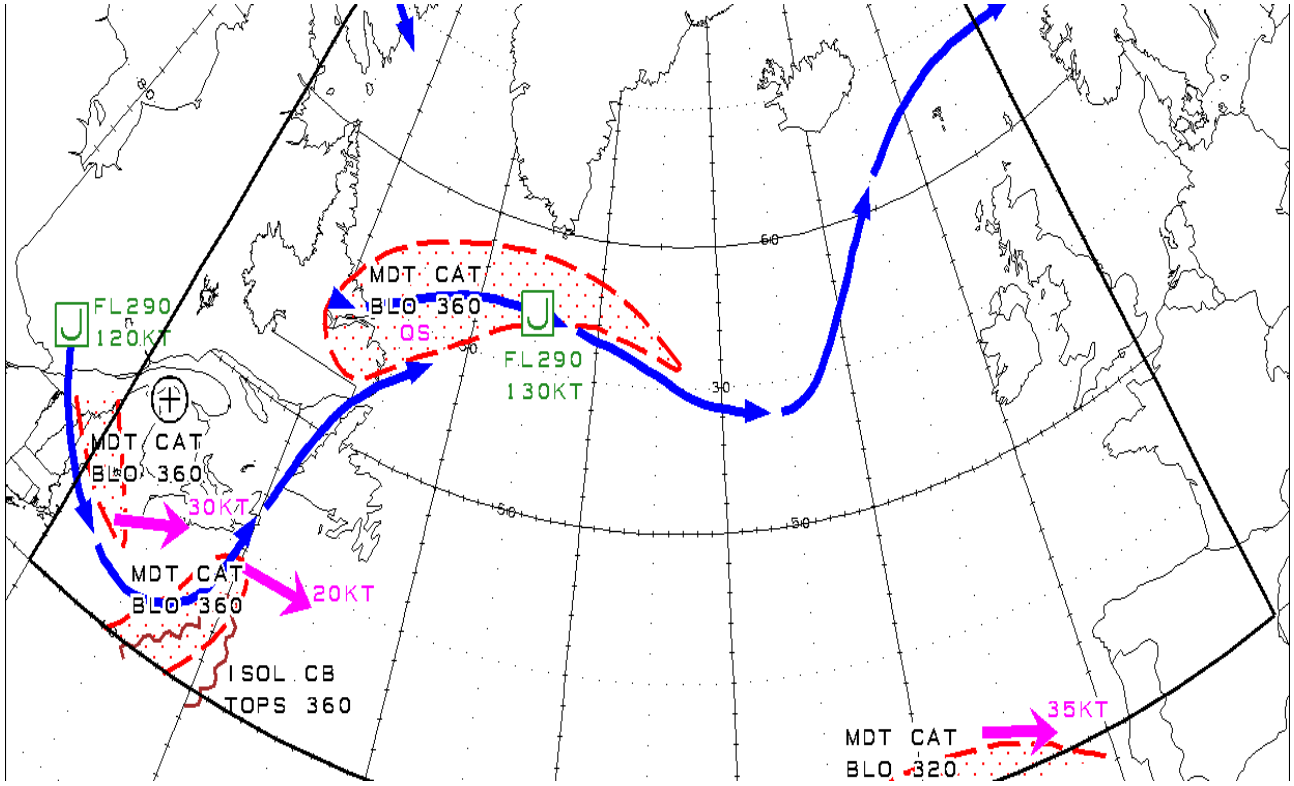
www.aviationweather.gov/products/swh/

Weather information



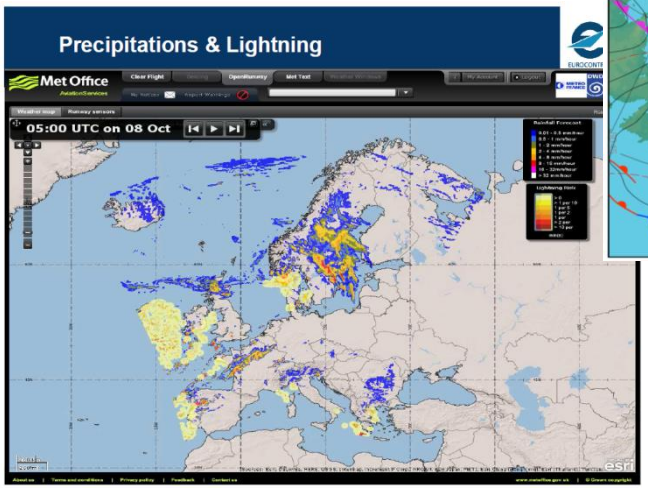
www.aviationweather.gov/obs/sat/intl/

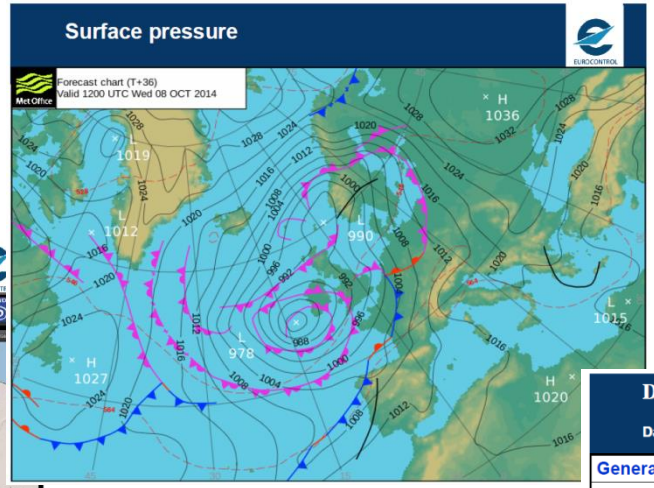
Weather information

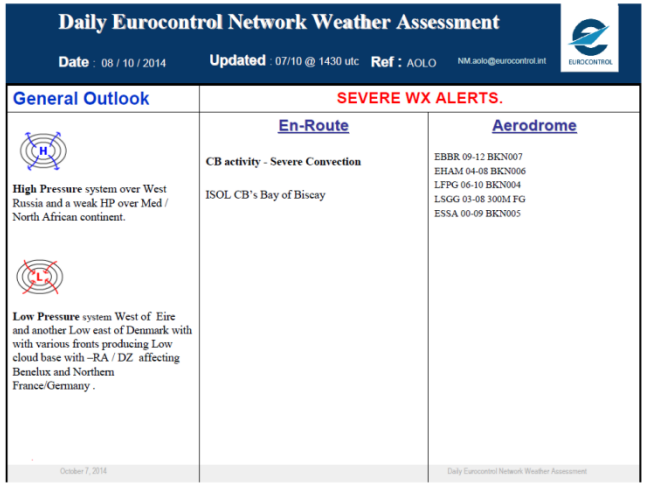


North Atlantic Track weather information

Weather information

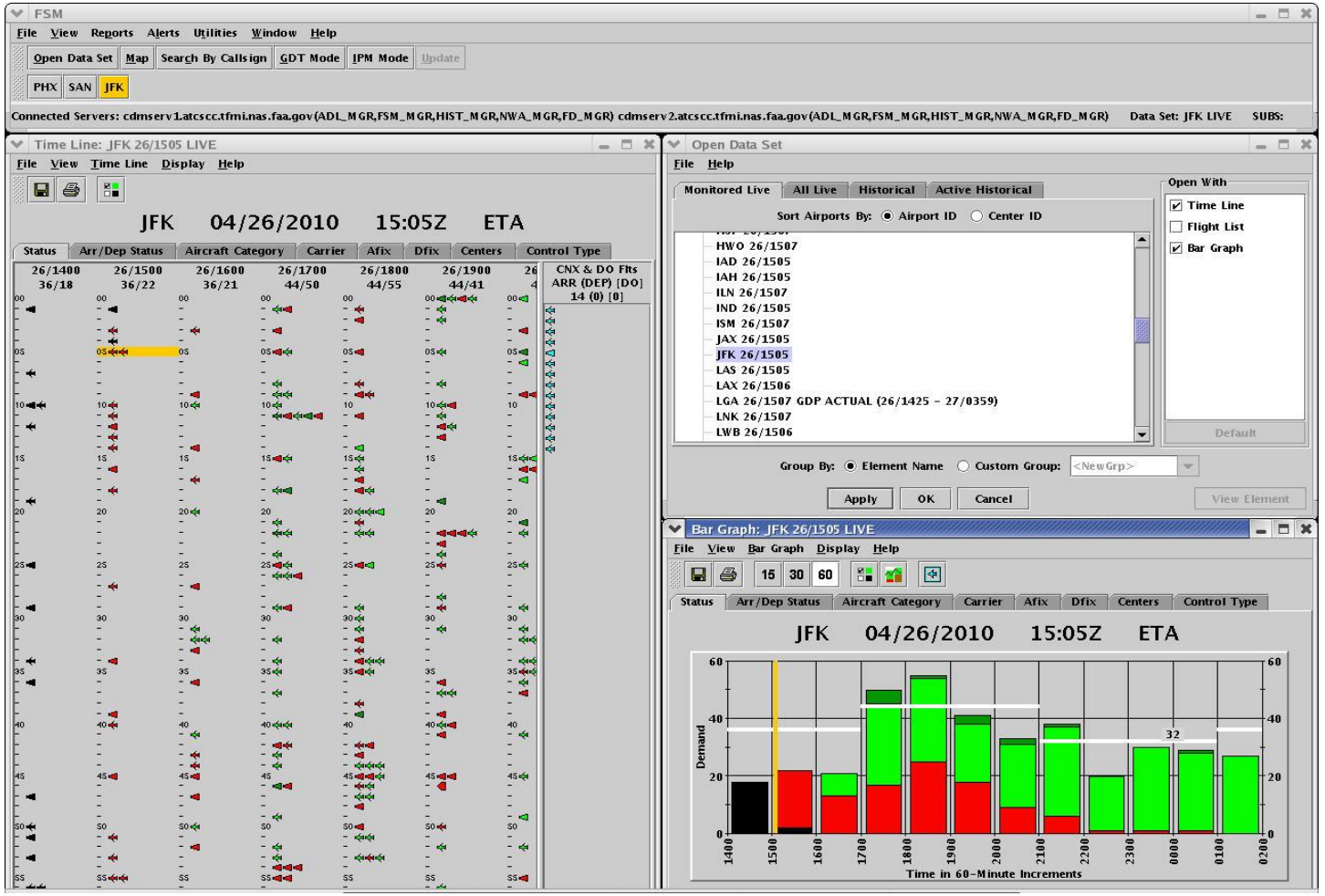






Network Management weather information

Traffic demand information (USA)

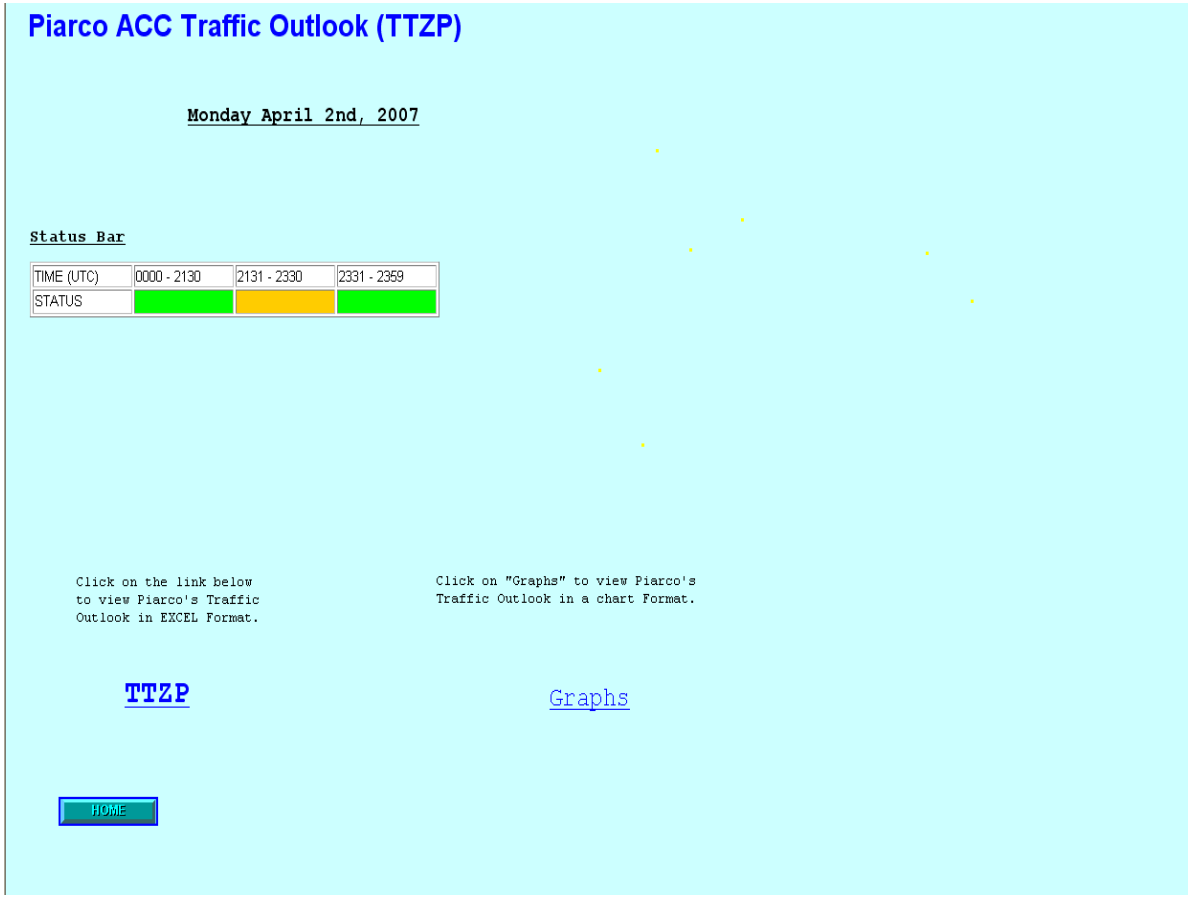


Traffic demand information (Mexico)

PROSAT

SIAAT

Traffic demand information (Piarco)



Piarco ACC Traffic Outlook (TTZP)

Monday April 2nd, 2007

Status Bar

TIME (UTC)	0000 - 2130	2131 - 2330	2331 - 2359
STATUS			

Click on the link below to view Piarco's Traffic Outlook in EXCEL Format.

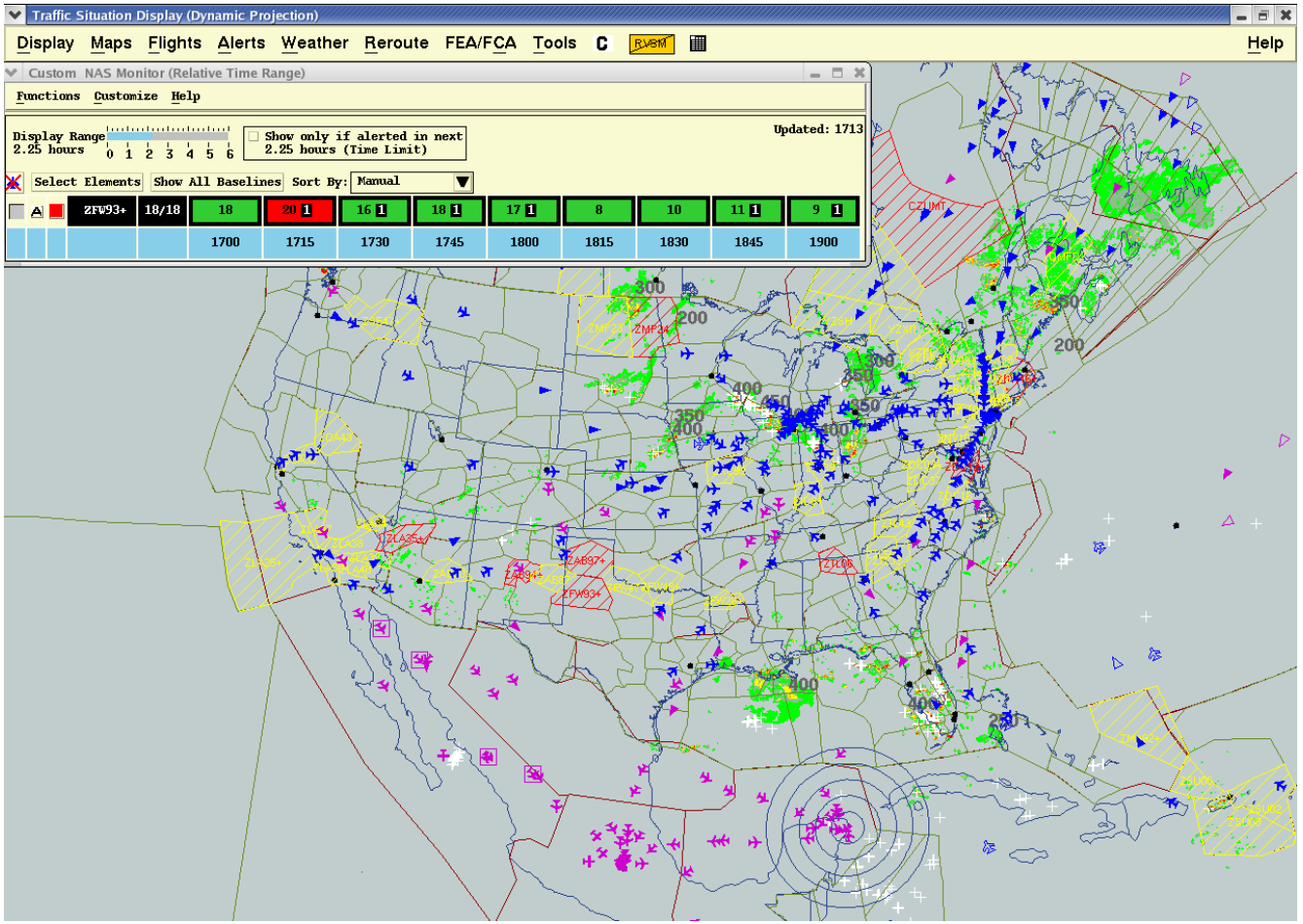
TTZP

Click on "Graphs" to view Piarco's Traffic Outlook in a chart Format.

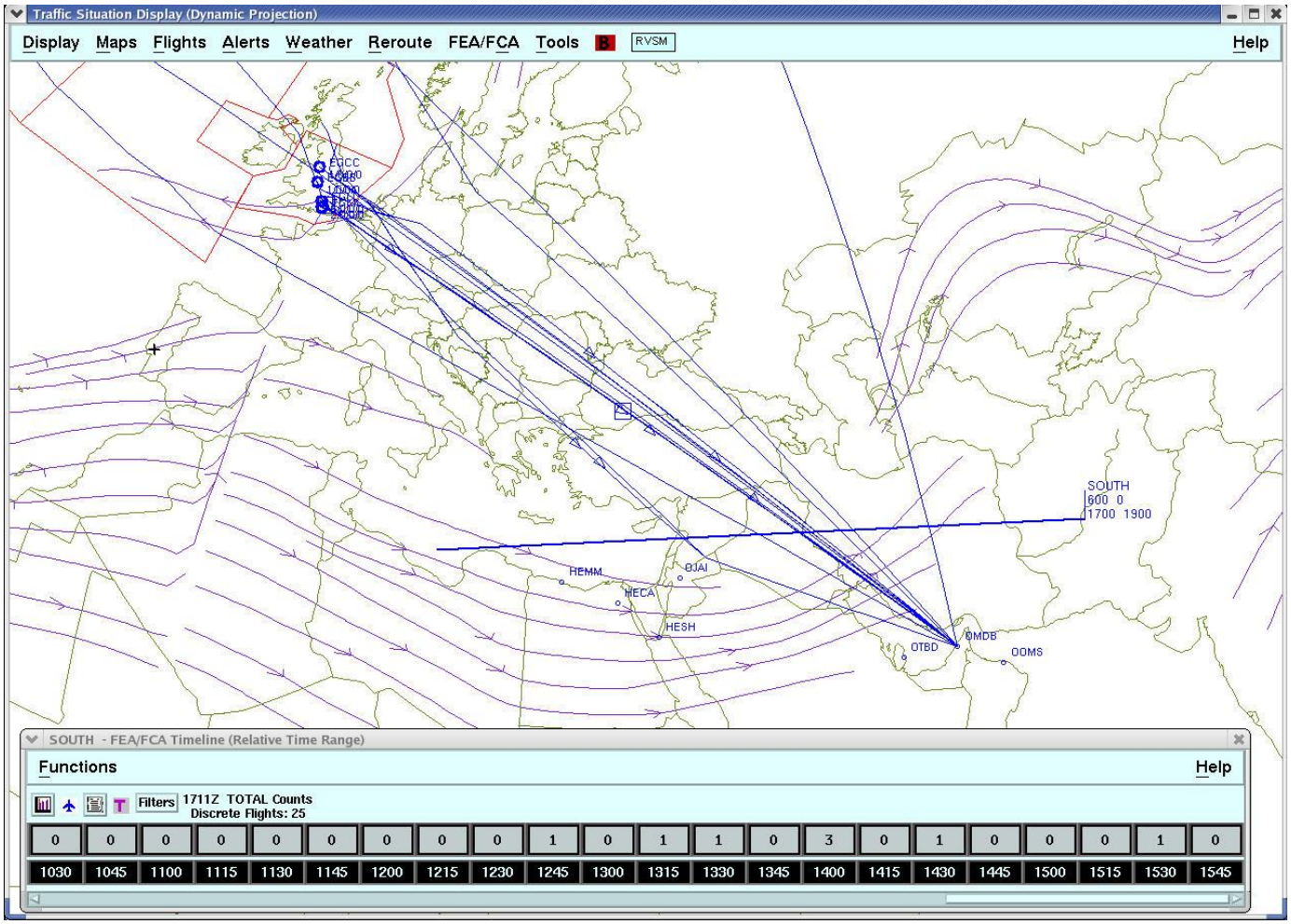
Graphs

HOME

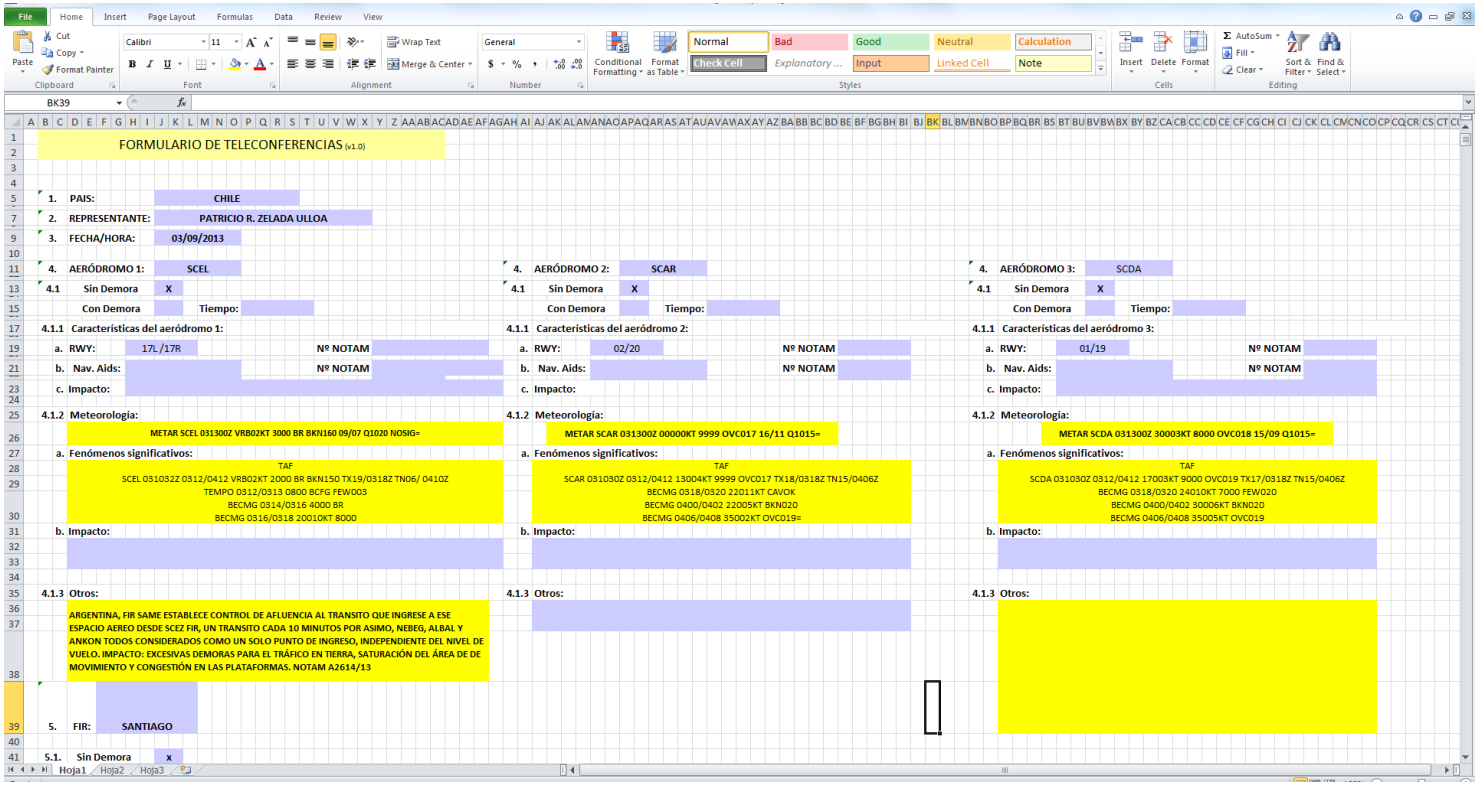
Traffic display information



Traffic display information



Communication



FORMULARIO DE TELECONFERENCIAS (v1.0)

1. PAIS: CHILE
2. REPRESENTANTE: PATRICIO R. ZELADA ULLOA
3. FECHA/HORA: 03/09/2013

4. AERÓDROMO 1: SCEL
4.1 Sin Demora: X
Con Demora: Tiempo:
4.1.1 Características del aeródromo 1:
a. RWY: 17L /17R Nº NOTAM
b. Nav. Aids: Nº NOTAM
c. Impacto:
4.1.2 Meteorología:
METAR SCEL 031300Z VRB02KT 3000 BR BKN160 09/07 Q1020 NOSIG=
a. Fenómenos significativos:
TAF
SCEL 031032Z 0312/0412 VRB02KT 2000 BR BKN150 TX19/0318Z TN06/ 0410Z
TEMPO 0312/0313 0800 BCFG FEW003
BECMG 0314/0316 4000 BR
BECMG 0316/0318 20010KT 8000
b. Impacto:
4.1.3 Otros:
ARGENTINA, FIR SAME ESTABLECE CONTROL DE AFLUENCIA AL TRANSITO QUE INGRESE A ESE ESPACIO AEREO DESDE SCEZ FIR, UN TRANSITO CADA 10 MINUTOS POR ASIMO, NEBEG, ALBAL Y ANKON TODOS CONSIDERADOS COMO UN SOLO PUNTO DE INGRESO, INDEPENDIENTE DEL NIVEL DE VUELO. IMPACTO: EXCESIVAS DEMORAS PARA EL TRÁFICO EN TIERRA, SATURACIÓN DEL ÁREA DE DE MOVIMIENTO Y CONGESTIÓN EN LAS PLATAFORMAS. NOTAM A2614/13

5. FIR: SANTIAGO
5.1. Sin Demora: x

4. AERÓDROMO 2: SCAR
4.1 Sin Demora: X
Con Demora: Tiempo:
4.1.1 Características del aeródromo 2:
a. RWY: 02/20 Nº NOTAM
b. Nav. Aids: Nº NOTAM
c. Impacto:
4.1.2 Meteorología:
METAR SCAR 031300Z 00000KT 9999 OVC017 16/11 Q1015=
a. Fenómenos significativos:
TAF
SCAR 031030Z 0312/0412 13004KT 9999 OVC017 TX18/0318Z TN15/0406Z
BECMG 0318/0320 22011KT CAVOK
BECMG 0400/0402 22005KT BKN020
BECMG 0406/0408 35002KT OVC019=
b. Impacto:
4.1.3 Otros:

4. AERÓDROMO 3: SCDA
4.1 Sin Demora: X
Con Demora: Tiempo:
4.1.1 Características del aeródromo 3:
a. RWY: 01/19 Nº NOTAM
b. Nav. Aids: Nº NOTAM
c. Impacto:
4.1.2 Meteorología:
METAR SCDA 031300Z 30003KT 8000 OVC018 15/09 Q1015=
a. Fenómenos significativos:
TAF
SCDA 031030Z 0312/0412 17003KT 9000 OVC019 TX17/0318Z TN15/0406Z
BECMG 0318/0320 24010KT 7000 FEW020
BECMG 0400/0402 30006KT BKN020
BECMG 0406/0408 35005KT OVC019
b. Impacto:
4.1.3 Otros:

Email exchange in the ICAO SAM Region

Communication

ATCSCC Advisory

ATCSCC ADVZY 065 DFW/ZFW 10/06/2014 DFW DIVERSION RECOVERY

RAW TEXT:

```
ATCSCC  ADVZY 065 DFW/ZFW DFW DIVERSION RECOVERY
THE ATCSCC HAS ACTIVATED THE DIVERSION RECOVERY TOOL
FOR DFW.  CUSTOMERS SHOULD ENSURE THAT DVRSN IS INCLUDED
IN FLIGHT PLAN REMARKS OF DIVERTED AIRCRAFT.
NOTE THAT IF THERE IS A GROUND DELAY PROGRAM OR GROUND STOP
IN EFFECT FOR THE DESTINATION AIRPORT DIVERTED FLIGHTS ARE
NOT AUTOMATICALLY EXEMPT AND WILL STILL RECEIVE AN EDCT.
061305-061605



14/10/06 13:05  DCCOPS./nfs/lxstn34
```

Communication

Communication

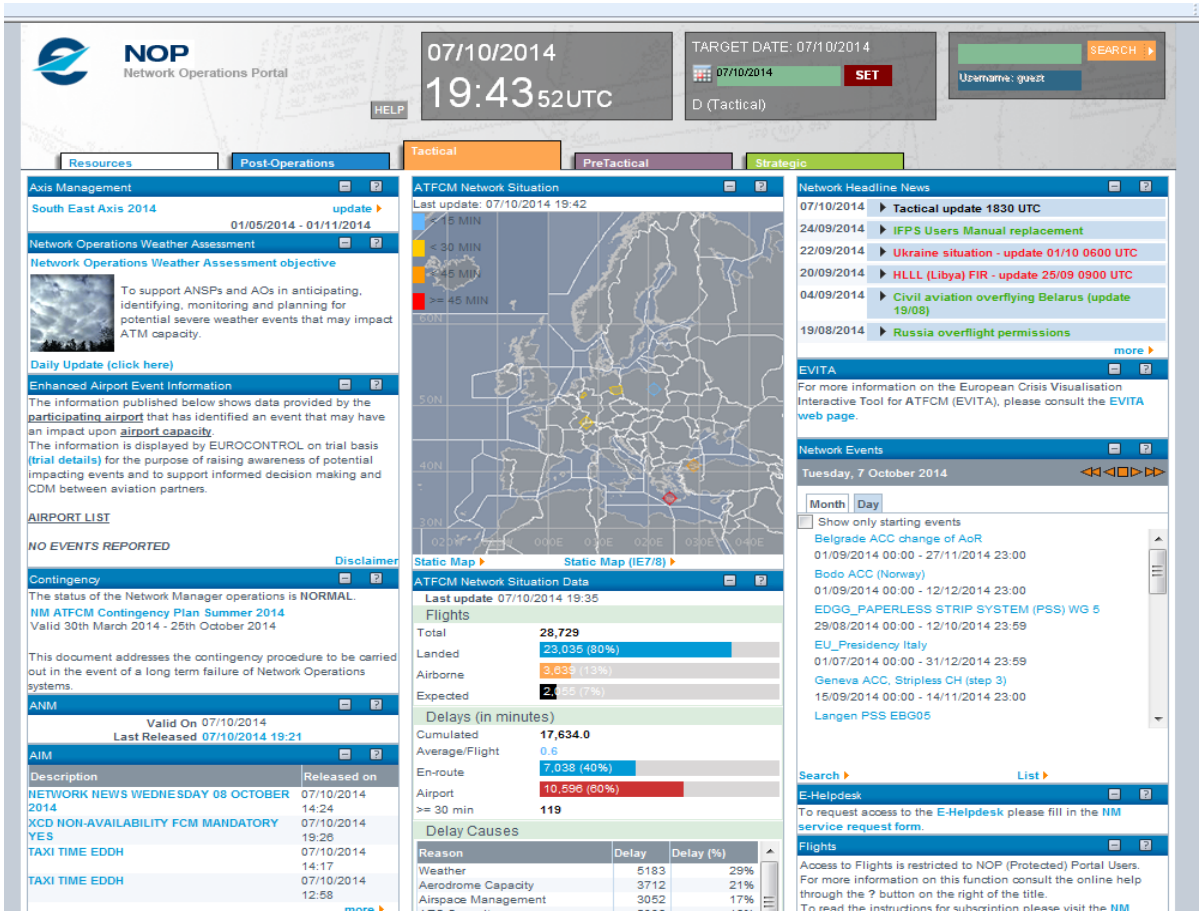
ATCSCC Advisory

ATCSCC ADVZY 076 DCC 10/06/2014 US/MEXICO OUTLOOK_FYI

MESSAGE: VALID FOR 061330 THRU 071329
TERMINAL CONSTRAINTS:
MMMX - NONE
MMSD - NONE
MMUN - NONE
ENROUTE CONSTRAINTS:
ZMZ - NONE
ZMO - NONE
ZMR - NONE
ZMC - NONE
TELCON PHONE NUMBER: (540) 359-3200 PIN 2444#
NEXT PLANNING TELCON 071330Z.

EFFECTIVE TIME: 061337 - 071329
SIGNATURE: 14/10/06 13:38

Communication



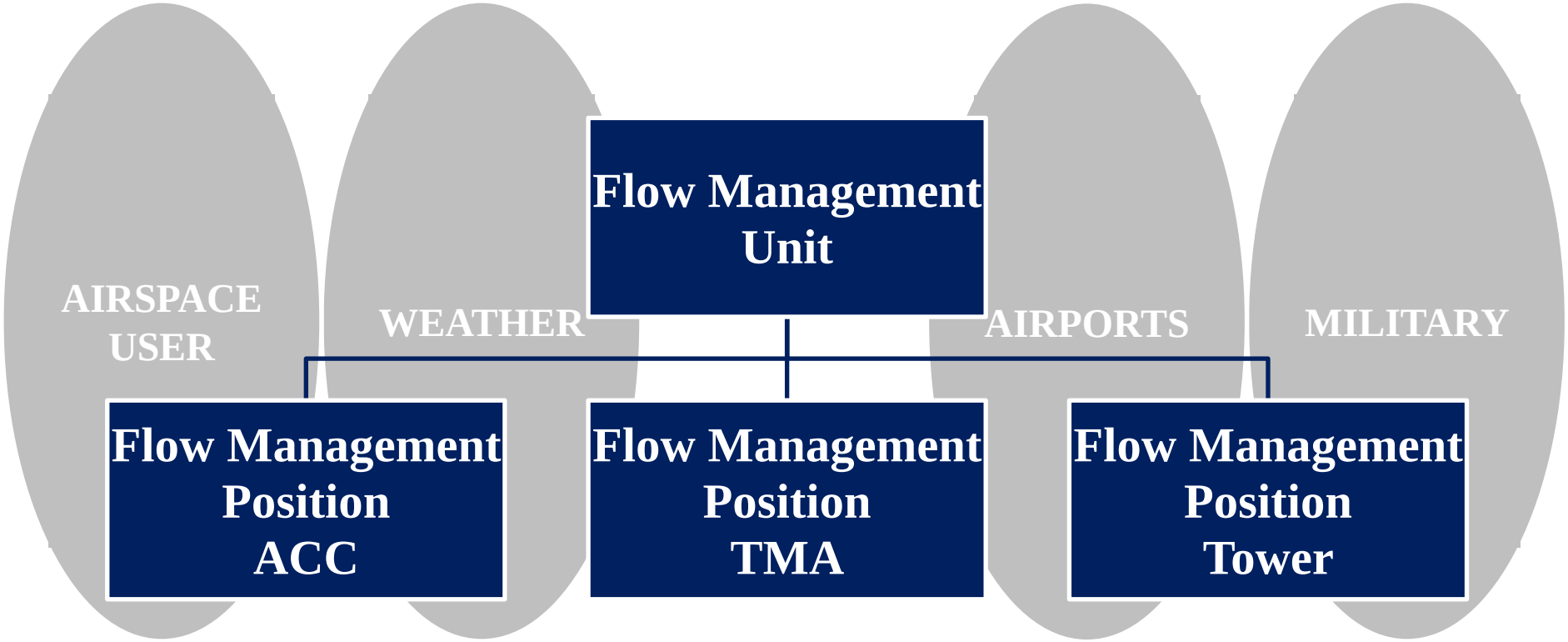
Communication

ATFM Structure

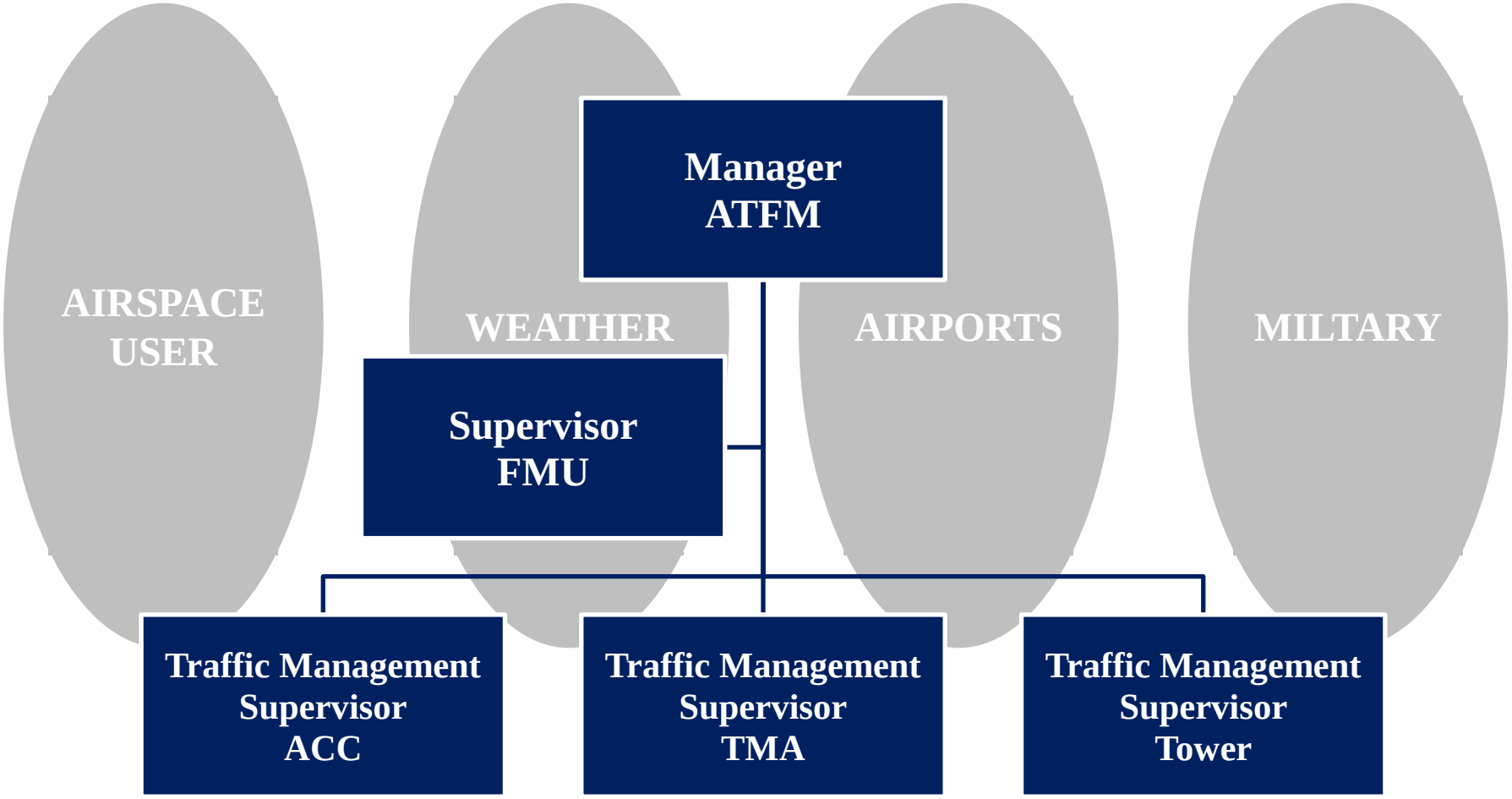
- Define the ATFM structure that will be established
  - Flow management unit (FMU)
  - Flow management positions (FMP)

- Identify the locations for these facilities

ATFM Structure



ATFM Staff


AIRSPACE USER
WEATHER
AIRPORTS
MILTARY
Manager ATFM
Supervisor FMU
Traffic Management Supervisor ACC
Traffic Management Supervisor TMA
Traffic Management Supervisor Tower

ATFM Facilities and Equipment

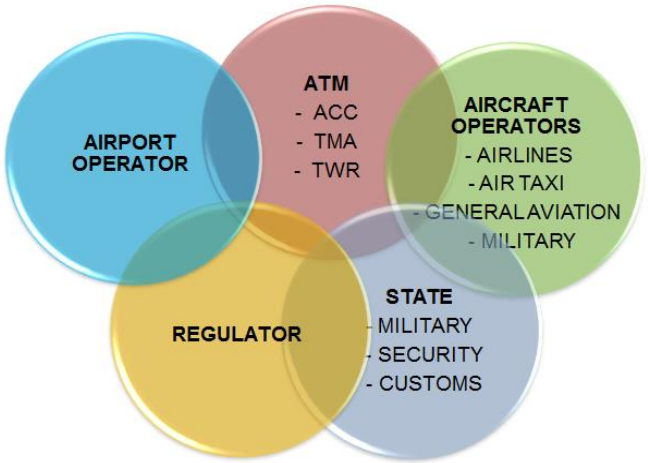
- Consider the facilities and equipment that will need to be procured for the implementation of ATFM

ATFM Personnel

- Identify the operational personnel and operational phone numbers that will serve as the operational points of contact at each stakeholder location

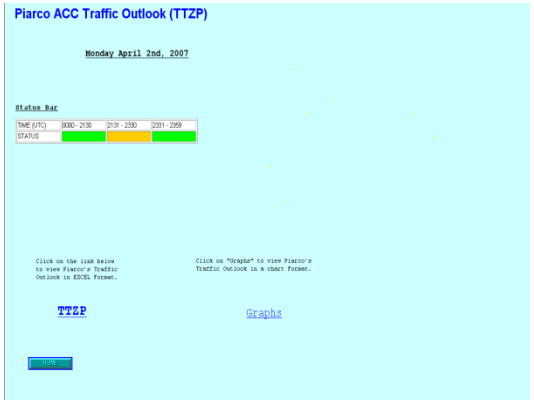
ATFM Personnel

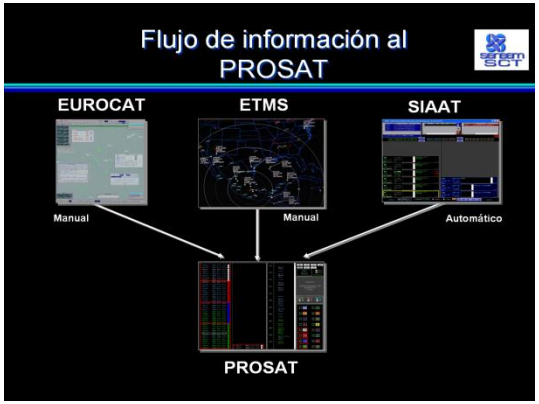
- Area control centre
- Approach control
- Control tower
- Airport operations centre
- Airline operations centre
- Meteorological office
- Military flight operations centre
- General aviation operations centre

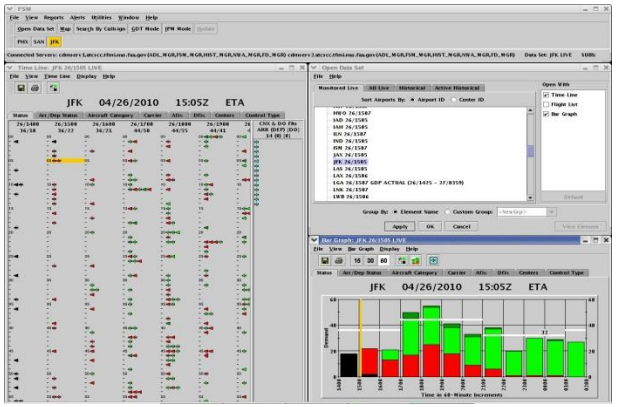


Predict Demand

- Establish a process for predicting demand
  - Airport
  - Sector







Traffic Management Measures

- Discuss and develop traffic management measures that will be applied to balance demand and capacity
  - For example:
    - Miles-in-trail
    - Reroutes
    - Level capping
    - Ground delay program
- Develop the process for implementing them

ATFM Letters of Agreement

- Develop the applicable ATFM Operational Letters of Agreement

SMART

ATCSCC

FEDERAL AVIATION ADMINISTRATION (FAA) DAVID J. HURLEY
AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER (ATCSCC)/
SERVICIOS A LA NAVEGACIÓN EL ESPACÍO AÉREO MEXICANO (SENEAM)
CENTRO DE CONTROL DE FLUJO MÉXICO (CCFMEX)

LETTER OF AGREEMENT

EFFECTIVE: MAR 7 2007

SUBJECT: ATCSCC/CCFMEX COLLABORATION

The FAA and Servicios a la Navegación el Espacío Aéreo Mexicano (SENEAM) enter into this letter of agreement (LOA) to facilitate the safe and efficient movement of air traffic between and over both countries.

1. PURPOSE: The purpose of this LOA is to establish continuity of operations and air traffic flow management (ATFM) procedures between the ATCSCC in Herndon, Virginia, and the CCFMEX in Mexico City, Mexico. This LOA is not intended to replace any local agreements between Mexican area control centers (ACC) and United States air route traffic control centers (ARTCC). This LOA will promote coordination and collaboration between the ATCSCC and the CCFMEX regarding ground delay programs (GDP), airspace flow programs (AFP), and the routing of aircraft into and out of United States and Mexican airspace. The ATCSCC and the Mexico CCFMEX will be the primary points of contact for coordinating traffic management (TM) initiatives and operations between the United States and Mexico.

2. SCOPE: The procedures outlined are for use by the ATCSCC and the CCFMEX to provide normal air traffic services.

3. DEFINITIONS:

a. ACC – Area Control Center

b. AFP – Airspace Flow Program

c. ATCSCC – David J. Hurley Air Traffic Control System Command Center

d. CCFMEX – Mexican Flow Control Center

e. GDP – Ground Delay Program

f. OP – Operations Plan

g. RVSM – Reduced Vertical Separation Minima

h. SENEAM – Servicios a la Navegación en el Espacío Aéreo Mexicano

(4) The principal TM techniques to be implemented will consist of miles-in-trail, minutes-in-trail, reroutes, en route spacing programs, GDPs, AFPs, and ground stops.

(5) The ATCSCC and the CCFMEX will collaborate on the design of preferred routes and Severe Weather Avoidance Plan routes that use both Mexican and United States airspace or resources.

(6) The ATCSCC and the CCFMEX will provide feedback and share data on the impact and assessment of joint TM initiatives as required.

6. IMPLEMENTATION: The procedures outlined in this letter of agreement will be implemented by operational personnel at the ATCSCC in the United States and at the CCFMEX in Mexico.

7. REVIEW PERIOD: The ATCSCC and the CCFMEX agree to participate in a yearly review of this document.

Michael A. Cirillo
Vice President, System Operations Services
Federal Aviation Administration

Date: FEB 2 8 2007

Ing. Agustín Arellano Rodríguez
Director General
Servicios a la Navegación en el Espacío Aéreo Mexicano

Date: March 7, 2007

Michael J. Sammartino
Director, System Operations
Federal Aviation Administration

Date: Feb. 28, 2007

C.T.A. Miguel Pérez Lira
Director General Adjunto de Transito Aereo
Servicios a la Navegación en el Espacío Aéreo Mexicano

Date: MARCH 7 2007

Daniel E. Smiley
Manager, David J. Hurley Air Traffic Control System Command Center
Federal Aviation Administration

Date: Feb 28 2007

C.T.A. Ricardo Torres Muela
Direccion de Transito Aereo
Servicios a la Navegación en el Espacío Aéreo Mexicano

Date: MARCH 07, 2007.

NOC

ATCSCC

FEDERAL AVIATION ADMINISTRATION (FAA) DAVID J. HURLEY
AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER (ATCSCC)/
NAV CANADA NATIONAL OPERATIONS CENTRE (NOC)

LETTER OF AGREEMENT

EFFECTIVE: May 31, 2006

SUBJECT: ATCSCC/NOC COLLABORATION

NAV CANADA and the FAA enter into this Letter of Agreement (LOA) to facilitate the safe and efficient movement of air traffic between and over both countries, pursuant to the Canada/United States treaty relating to aircraft control near the common boundary and the NAV CANADA and FAA Agreement CON-1-7500, of which Annex 1 relates to air traffic management.

1. PURPOSE: The purpose of this LOA is to establish continuity of operations and air traffic flow management (ATFM) procedures between the ATCSCC in Herndon, Virginia, and the NOC in Ottawa, Canada. This LOA is not intended to replace any local agreements between Canadian Area Control Centres (ACC) and United States Air Route Traffic Control Centers (ARTCC). This LOA will promote coordination and collaboration between the ATCSCC and the NOC regarding Ground Delay Programs (GDP), Airspace Flow Programs (AFP) and the routing of aircraft into and out of U.S. and Canadian airspace. This will mandate that the NOC and the ATCSCC be the primary points of contact for the coordination of traffic management (TM) initiatives and operations between the United States and Canada.

2. SCOPE: The procedures outlined herein are for use by the ATCSCC and NOC to provide normal air traffic services.

3. DEFINITIONS:

a. ACC – Area Control Centre

b. AFP – Airspace Flow Program

c. ATCSCC – David J. Hurley Air Traffic Control Area Control System Command Center

d. GDP – Ground Delay Program

e. NAT – North Atlantic Tracks

f. NOC – National Operations Centre

g. OP – Operations Plan

h. TM – Traffic Management

(5) The ATCSCC and NOC will collaborate on the design of preferred routes and Severe Weather Avoidance Plan routes that use both Canadian and United States airspace or resources.

(6) The ATCSCC and NOC will provide feedback and share data on the impact and assessment of joint TM initiatives as required.

6. IMPLEMENTATION: The procedures outlined in this letter of agreement will be implemented by operational personnel at the ATCSCC in the United States and at the NOC in Canada.

7. REVIEW PERIOD: The NOC and ATCSCC agree to participate in a yearly review of this document.

James H. Ries
Federal Aviation Administration
Acting Manager, David J. Hurley Air Traffic Control System Command Center

Date: 3/29/06

David Rome
NAV CANADA
Manager, National Operations Centre

Date: April 28/06

Michael J. Sammartino
Federal Aviation Administration
Director of System Operations Services

Date: MAR 29, 2006

Arlene Yakeley
NAV CANADA
Director, IFR Operations

Date: May 2/06

Michael A. Cirillo
Federal Aviation Administration
Vice President, System Operations Services

Date: Mar 29, 2006

Kathleen Fox
NAV CANADA
Vice President, Operations

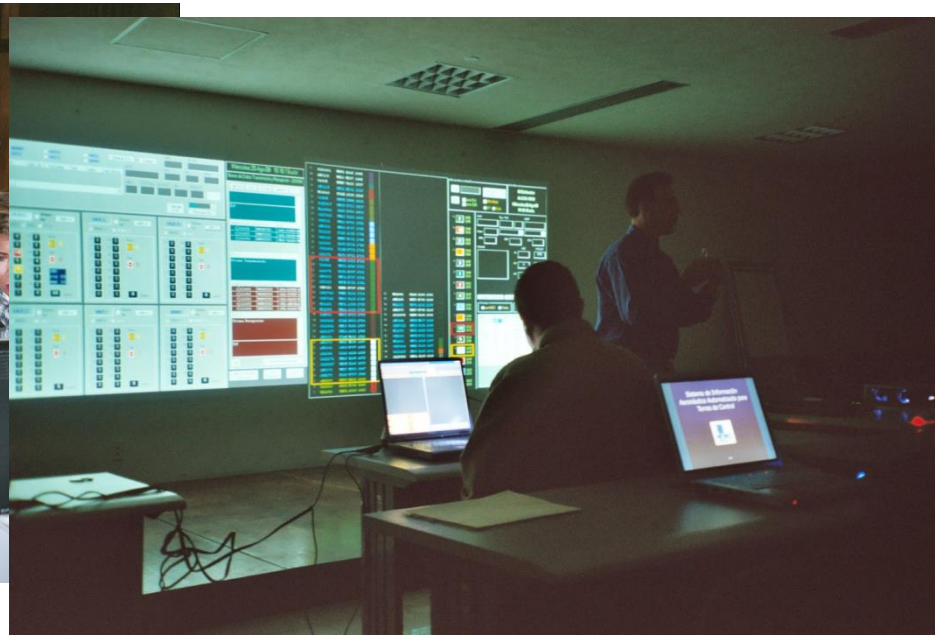
Date: May 12, 2006

ATFM Procedures Manual

- Develop the procedures manual and training materials associated with implementing the initial phase of ATFM
- Examples include:
  - Flow Management Unit
  - Flow Management Positions
  - Stakeholder ATFM Positions

ATFM Training

- Train the appropriate personnel regarding the processes and procedures necessary for ATFM implementation



ATFM Implementation

- Establish an implementation date for the ATFM service
- Implement the process and procedures
- Evaluate the results
- Coordinate and make adjustments, as necessary

Summary

- Take the best from ATFM lessons learned around the world … and
- Develop your ATFM solution … then
- Connect your solution to the developing global ATFM system

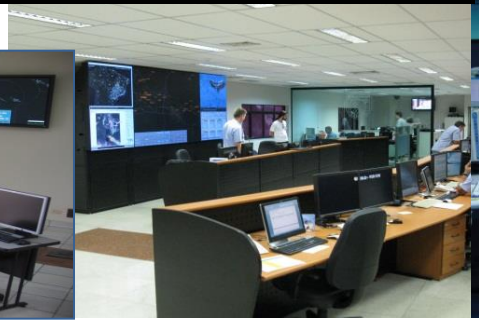






YOUR PHOTO HERE






The vision:

Seamless ATFM Operations Around the World

Thank you !