INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE

REPORT OF THE FIRST MEETING OF THE ASIA/PACIFIC AIR TRAFFIC FLOW MANAGEMENT STEERING GROUP (ATFMSG/1)

Tokyo, Japan, 08 – 10 December 2010

The views expressed in this Report should be taken as those of the Meeting and not of the Organization

Approved by the Meeting
and Published by the ICAO Asia and Pacific Regional Office

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1.1 Introduction

1.1.1 The First Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFMSG/1) was held at "Mita-kaigisho" in Tokyo, Japan from Wednesday, 08 to Friday, 10 December 2010.

1.2 Attendance

1.2.1 The meeting was attended by 23 participants from Hong Kong China, Japan, Philippines, Republic of Korea, Singapore, Thailand, United States and IATA. A complete list of participants is at **Appendix A** to this Report.

1.3 Officers and Secretariat

1.3.1 Mr. Len Wicks, Regional Officer ATM of the ICAO Asia and Pacific Regional Office acted as Secretariat of the Meeting.

1.3.2 Due to the technical nature of the subject and being the first meeting of its type, the Senior United States Representative was requested to assist the Secretariat as Chairperson.

1.3.3 To support the activities of the ATFM Steering Group, Mr. Brian Bagstad of the US Federal Aviation Administration (FAA) served as Chairperson of the meeting.

1.4 Opening of the Meeting

1.4.1 Mr. Len Wicks welcomed all the participants on behalf of Mr. Mokhtar A. Awan, Regional Director, ICAO Asia and Pacific Office. Mr. Wicks thanked the Japan Civil Aviation Bureau (JCAB) for their gracious support of the ATFMSG/1 meeting. The participants then introduced themselves in the customary manner.

1.5 Documentation and Working Language

1.5.1 The working language of the meeting as well as all documentation was in English.

1.5.2 Six Working Papers were presented to the meeting. A list of papers is included at **Appendix B** to this Report.

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Agenda Item 1: Adoption of Agenda

1.1 The meeting reviewed the provisional agenda (WP/01) proposed by the Secretariat for ATFMSG/1, and adopted the following agenda:

Agenda Item 1: Adoption of Agenda

Agenda Item 2: Development of Terms of Reference (TOR)

Agenda Item 3: Review of Relevant Meetings/Information

Agenda Item 4: Development of ATFMSG Task List

Agenda Item 5: Any other business

Agenda Item 6: Date and venue for the next meeting

1.2 The chair outlined the objectives from the 2008 ATFM Seminar/Workshop and the expected objectives for the ATFMSG/1, as determined by APANPIRG. These included the preparation of an APAC Concept of Operations, and the development of a Terms of Reference (TORs) for the ATFM Steering Group.

1.3 Japan briefed the meeting on venue administration matters.

Agenda Item 2: Development of Terms of Reference

2.1 The Meeting discussed WP/02 (Draft Terms of Reference), and reviewed the material contained therein. This included three Appendixes of material that was germane to the development of the ATFMSG TORs:

- Appendix A, *Report of the ICAO Asia/Pacific Air Traffic Flow Management Seminar/Workshop* (2008);
- Appendix B, *Report of the CAR/SAM Air Traffic Flow Management (ATFM) Regional Project for Latin America*;
- Appendix C, Doc 9426 (excerpt from Chapter 1, Air Traffic Flow Management and Flow Control).

2.2 It was agreed to delay discussion on the actual TORs until the end of the Steering Group meeting, so the participants would have a clearer idea of the future direction of the Group. After further ATFM material had been reviewed under Agenda Items 3 and 4, the meeting then discussed the draft TORs presented in WP/02.

2.3 The meeting participants did not believe that the Group should be delving into a detailed analysis of air traffic service (ATS) routes, or ATFM systems, with a view to assessing their appropriateness. This was considered to be the role of States, in conjunction with bi-lateral or multi-lateral coordination, which could be most effectively achieved through a sub-regional Air Traffic Management (ATM) Coordination Group. It was further agreed that the Steering Group was a high level forum, which provided regional guidance material and regional ATFM policies.

2.4 Notwithstanding the uncertainty whether it was necessary for the Steering Group to meet again (because there did not appear to be an immediate task to complete), the draft TORs were modified and agreed accordingly. A copy of the TORs as agreed is as follows:

Having considered Doc 9426 guidance material, regional air traffic data and the Major Traffic Flows (MTF), and noting that capacity-increasing measures have preference to use of ATFM:

1 develop and maintain an Asia/Pacific Regional ATFM Concept of Operations;

2. review and develop ATFM communications procedures, such as the *ATFM Communications Handbook for the Asia Pacific Region*;

3. encourage and develop mechanisms for ATFM data gathering, collation and sharing between States, International Organizations and ICAO;

4. encourage and support the development of integrated sub-regional ATFM systems, including any adjacent airspace affecting the Asia and Pacific Regions; and

5. encourage the development of collaborative decision-making processes, which could be partly fulfilled by the development of an ATFM web site by Asia and Pacific Region States with significant experience in ATFM.

The membership of the ATFMSG is open to any participants from Asia and Pacific Region States, International Organizations and ICAO.

Agenda Item 3: Review of Relevant Meetings/Information

3.1 During a broad discussion regarding the current status of ATFM initiatives, the following APAC regional activities were noted.

- Thailand was operating the BOBCAT slot management system used on AR-4 to alleviate traffic loading through Afghanistan airspace. It was also noted that the SEA-RR/TF (Southeast Asia Route Review Task Force) reviewed ATFM data on the AR-9 MTF.

- Mongolia had contacted the Secretariat to advise that they were implementing ATFM, and requested guidance from the ATFMSG in this respect.

- Australia was utilising a Required Time of Arrival (RTA) scheme at Sydney.

- The United States and Japan operated a formalised ATFM telecon to manage the North Pacific (NOPAC) routes. Russia would be involved in ATFM coordination with the USA in the near future. IATA noted that the Russian Far East gateways had a modified BOBCAT system.

- The Philippines will initially implement an Airport/Aerodrome ATFM for Manila after Trial Operations which will be concentrating more on scheduled Domestic Arrival and Departure flights coming mostly from Southern Airports. The Trial Operation will start by second week of January 2011.

- Hong Kong, China had ATFM procedures for Hong Kong, which were principally used during the typhoon season.

3.2 Meeting participants considered that each of the MTF should have ATFM planning, regardless of traffic density, to cater for contingency operations in addition to traffic loading. IATA stated that it was useful to review MTF and that this did not always have to be a formalized process. The United States noted that ATFM traffic data should not include sensitive commercial or security information. IATA suggested that it may be better to concentrate on sub-regional strategies that focused on the MTF, rather than a detailed regional ATFM concept, which may be difficult to achieve. IATA further stated that the Steering Group should not delve into State to State ATFM issues.

3.3 While further discussing the CAR/SAM Air Traffic Flow Management Project principles, it was noted that this project was focused on actual ATFM implementation, so references to implementation such as training were not considered to be relevant to the APAC Concept of Operations. The meeting also did not agree with references to ATFM priorities being on a first-come, first serve basis, as there were many instances where priorities based on economic necessity were in place (such as scheduled passenger carrying jets having priority over smaller non-scheduled aircraft).

3.4 Japan and the USA were keen to emphasise that ATFM measures were a positive, designed to optimise airspace and aerodrome capacity. Thus, ATFM was viewed as maximising capacity and minimising inefficiencies.

3.5 The meeting agreed that civil/military coordination was a key enabler to effective ATFM, as was a common language for expressing ATFM measures, which must be concise in nature and not verbose. It was noted by the USA that aerodrome operators had a role to play in ATFM Collaborative Decision-Making (CDM).

3.6 WP/03 (ATFM Survey) was reviewed. It was noted that the USA response on capacity assessment contained metrics that were probably most useful, and should be noted by other States requiring an assessment methodology.

3.7 The meeting discussed the status of the Global ATFM Manual in WP/04. It was possible that this Manual may have the effect of making the *ATFM Communications Handbook for the Asia Pacific Region* redundant as the Manual may incorporate the Handbook's material.

3.8 The Bay of Bengal ATFM Task Force Task List was reviewed by the meeting (WP/05).

3.9 Thailand gave a detailed presentation of the BOBCAT slot management system. This presentation would be made available on the APAC Office ATFMSG web site.

3.10 The USA then made an extensive presentation on their ATFM activities, including an overview of the specialized software tools that were being utilised. The presentation would be made available on the APAC Office ATFMSG web site. Details of the software tools are available in **Appendix C** to this report.

3.11 The USA also provided information on their Traffic Management Initiatives (TMI). The TMIs are important tools for managing the air traffic system, provided they are coordinated and applied properly. TMIs are applicable when it is necessary to manage imbalances in air traffic demand and system capacity, recognising that they do cause a consequence to the stakeholders. The USA notes that it is important to consider this and implement only the initiatives that are necessary for maintaining the integrity of the system. Therefore, traffic management personnel should employ the least restrictive methods available in order to mitigate imbalances. The TMI are detailed as follows.

Name	Description
Airspace flow programs (AFP)	An AFP allows for formal Departure Control Times to be issued to flights traversing a predefined area of airspace that is congested or constrained by severe weather or traffic congestion. This is essentially a GDP for airspace as opposed to an airport and controls entry/exit times into the impacted airspace
Ground delay programs (GDP)	Aircraft are held on the ground to control their departure time in order to manage capacity and demand at a specific airport. Assigning a departure time, with the know enroute time to the airport controls the arrival time at the impacted airport. The purpose of the program is to limit airborne holding and possible diversions.
Ground stops (GS)	GS is a process that requires aircraft that meet specific criteria to remain on the ground. Since this is one of the most restrictive methods of traffic management, alternative initiatives should be explored and implemented if appropriate. GSs should be used: a) In severely reduced capacity situations (below most user arrival minimums, airport/runway closed for snow removal, or aircraft accidents/incidents); b) To preclude extended periods of airborne holding; c) To preclude sector/center reaching near saturation levels or airport grid lock; d) In the event a facility is unable or partially unable to provide ATC services due to unforeseen circumstances; and e) When routings are unavailable due to severe weather or catastrophic events.
Miles-in-trail (MIT)	The number of miles required between aircraft that meet a specific criteria. The criteria may be separation, airport, fix, altitude, sector, or route specific. MIT are used to apportion traffic into manageable flows, as well as to provide space for additional traffic (merging or departing) to enter the flow of traffic.
Minutes-in-trail (MINIT)	The number of minutes required between successive aircraft. It is normally used in a non-radar environment, or when transitioning to a non-radar environment, or when additional spacing is required due to aircraft deviating around weather.

3.12 Japan made two presentations, one on their CARATS ATFM system and the other on CDM techniques used in Japan. These presentations would be made available on the APAC Office ATFMSG web site.

Agenda Item 4: Development of ATFM/SG Task List

4.1 The meeting discussed WP06 (Draft APAC ATFM Concept of Operations), which was drafted by the Co-Chairman. After extensive review, participants agreed on a modified text that the ATFMSG/1 considered fulfilled the task of a regional Concept of Operations. There did not appear to be any outstanding tasks for the Steering Group, so a formal Task List was not developed.

Agenda Item 5: Any Other Business

5.1 There was no other business.

Agenda Item 6: Date and Venue for the next meeting

6.1 The meeting did not discuss the matter of the next meeting date and venue as it was not clear whether the Steering Group would meet again in the near future, given that there were no immediate tasks.

7. **Closing of the meeting**

7.1 The Chairperson thanked all participants for their active participation and cooperation which had contributed significantly to the successful outcome of the meeting. In particular, the Secretariat thanked the JCAB for their administrative support of the meeting.

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List of Participants

	Name		Title/Organization	TEL/FAX/E-MAIL
1.	**HONG KONG, CHINA (3)**			
	1.	Mr. Lucius Fan	Senior Operations Officer Civil Aviation Department 4/F, Air Traffic Control Complex & Tower Hong Kong International Airport Hong Kong, China	Tel: +852-2910 6466 Fax: +852-2910 0186 E-mail: lwcfan@cad.gov.hk
	2.	Mr. Peter Chadwick	Senior Operations Officer Civil Aviation Department 4/F, Air Traffic Control Complex & Tower Hong Kong International Airport Hong Kong, China	Tel: +852-2910 6411 Fax: +852-2910 0186 E-mail: pmchadwick@cad.gov.hk
	3.	Ms. Angela Lun	Operational ATC Supervisor Civil Aviation Department 4/F, Air Traffic Control Complex & Tower Hong Kong International Airport Hong Kong, China	Tel: +852-2910 6808 Fax: +852-2910 0186 E-mail: awmlun@cad.gov.hk
2.	**JAPAN (5)**			
	4.	Mr. James T. Spillane	Supervisory Traffic Management Coordinator Federal Aviation Administration #1002 M. Tower 1-7-31 Minami Minato-ku 106-0047 Tokyo, Japan	Tel: +(090) 4610 2880 E-mail: radarluv@gmail.com

	Name		Title/Organization	TEL/FAX/E-MAIL
	5.	Mr. Kimihiko Ito	Special Assistant to the Director ATC Division Japan Civil Aviation Bureau Ministry of Land, Infrastructure, Transport and Tourism 2-1-3 Kasumigaseki Chiyoda-ku, Tokyo 100-8918 Japan	Tel: +(81) 3-5253 8749 Fax: +(81) 3-5253 1663 E-mail: itou-k2rz@mlit.go.jp
	6.	Mr. Toshiyuki Masuda	Chief, Operations Section ATC Division Japan Civil Aviation Bureau Ministry of Land, Infrastructure, Transport and Tourism 2-1-3 Kasumigaseki Chiyoda-ku, Tokyo 100-8918 Japan	Tel: +(81) 3-5253 8749 Fax: +(81) 3-5253 1663 E-mail: masuda-t2t7@mlit.go.jp
	7.	Mr. Takahiro Morishima	Special Assistant to the Director ATS System and Planning Division Air Traffic International Affairs office Japan Civil Aviation Bureau Ministry of Land, Infrastructure, Transport and Tourism 2-1-3 Kasumigaseki Chiyoda-ku, Tokyo 100-8918 Japan	Tel: +(81) 3-5253 8740 Fax: +(81) 3-5253 1663 E-mail: morishima-t2zg@mlit.go.jp

	Name		Title/Organization	TEL/FAX/E-MAIL
	8.	Mr. Shoichi Kosugi	Special Assistant to the Director ATS System and Planning Division Japan Civil Aviation Bureau Ministry of Land, Infrastructure, Transport and Tourism 2-1-3 Kasumigaseki Chiyoda-ku, Tokyo 100-8918 Japan	Tel: +(81) 3-5253 8740 Fax: +(81) 3-5253 1663 E-mail: kosugi-s07vf@mlit.go.jp
3.	**PHILIPPINES (2)**			
	9.	Mr. Victorino P. Valencia, Jr.	Chief Air Traffic Controller Civil Aviation Authority of the Philippines 4th Floor CAAP Admin Bldg MIA Road, Pasay City 1300 Philippines	Tel: +63 (2) 8799179 or 8799160 Fax: +63 (2) 879 160 or 8799 179 E-mail: vvalencia32456@gmail.com
	10.	Mr. Virgilio R. Cipriano	Air Traffic Controller Civil Aviation Authority of the Philippines #30 S. Alquillera St. Pater 05 Metro Manila Philippines	Tel: +63 (2) 8799179 Fax: +63 (2) 8799 179 E-mail: virgiliocipriano@yahoo.com
4.	**REPUBLIC OF KOREA (2)**			
	11.	Mr. Hong, Sung min	Assistant Director, ATM Division Ministry of Land, Transport and Maritime Affairs 1-8 Byeoryang-dong Gwacheon-si Gyeonggi-do 427-800 Republic of Korea	Tel: 82-2-2669 6434 Fax: 82-2-6742 7289 E-mail: smhong01@korea.kr

	Name		Title/Organization	TEL/FAX/E-MAIL
	12.	Ms. Shin, Jung ok	Assistant Director, ATC Division Air Traffic Center P.O. Box 26, Incheon Airport Jung-gu, Incheon city Republic of Korea	Tel: 82-32-880 0234 Fax: 82-32-889-2381 E-mail: forjade@korea.kr
5.	**SINGAPORE (3)**			
	13.	Mr. Hermizan M. Jumari	Senior Air Traffic Control Manager (ATM) Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel: 65-6595 6064 Fax: 65-6545 6516 E-mail: hermizan_jumari@caas.gov.sg
	14.	Mr. Kuah Kong Beng	Chief Air Traffic Control Officer Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel: 65-6541 2405 Fax: 65-6545 6516 E-mail: kuah_kong_beng@caas.gov.sg
	15.	Mr. Edmund Heng	Deputy Chief (Singapore ATC Centre) Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel: 65-6541 2430 Fax: 65-6545 6516 E-mail: edmund_heng@caas.gov.sg
6.	**THAILAND (1)**			
	16.	Mr. Piyawut Tantimekabut	Executive Officer, Systems Engineering Aeronautical Radio of Thailand Ltd 102 Ngamduplee Thungmahamek, Sathorn Bangkok 10120, Thailand	Tel: +66-2-287 8616 Fax: +66-2-287 8620 E-mail: piyawut.ta@aerothai.co.th piyawut@gmail.com

	Name		Title/Organization	TEL/FAX/E-MAIL
7.	**UNITED STATES (2)**			
	17.	Mr. Brian Bagstad	Senior ATO Representative, Asia and Pacific Region Federal Aviation Administration c/o US Embassy Singapore 27 Napier Road Singapore 258508	Tel: +65-6476 9462 E-mail: brian.bagstad@faa.gov
	18.	Mr. Timothy McHale	International Operations Specialist Air Traffic Control System Command Center Federal Aviation Administration 800 Independence Avenue, S.W. Washington, D.C. 20591 U.S.A.	Tel: +1-703-326 3973 E-mail: timothy.mchale@faa.gov
8.	**IATA (4)**			
	19.	Mr. Keisuke Makino	Assistant Manager Route Planning Flight Operations Japan Airlines International Co., Ltd. Terminal 1 3-2, Haneda Airport 3-chome Ota-ku, Tokyo 144-0041 Japan	Tel: +81-3-5756 3134 Fax: +81-3-5756 3527 E-mail: keisuke.makino@jal.com
	20.	Mr. Teppei Kitamura	Route Planning Flight Operations Japan Airlines International Co., Ltd. Terminal 1 3-2, Haneda Airport 3-chome Ota-ku, Tokyo 144-0041 Japan	Tel: +81-3-5756 3134 Fax: +81-3-5756 3527 E-mail: teppei.kitamura@jal.com

	Name		Title/Organization	TEL/FAX/E-MAIL
	21.	Mr. Toshiji Tanaka	Assistant Manager Route Planning Flight Standards Group Flight Operations Planning and Management All Nippon Airways Co., Ltd 3-3-2 Haneda Airport Ota-ku, Tokyo 144-85 Japan	Tel: +81-3-5757 5303 Fax: +81-3-5757-5404 E-mail: tosh.tanaka@ana.co.jp
	22.	Mr. Owen Dell	Manager International Operations Cathay Pacific Airways Limited International Affairs Department 9th Floor, Central Tower, Cathay Pacific City 8 Scenic Road Hong Kong International Airport Lantau Island Hong Kong, China	Tel: 852-2747 8829 Fax: 852-2141 8829 E-mail: owen_dell@cathaypacific.com
9.	**ICAO (1)**			
	23.	Mr. Len Wicks	Regional Officer, ATM ICAO Asia & Pacific Office 252/1 Vibhavadi Rangsit Road Ladyao, Chatuchak Bangkok 10900 Thailand	Tel: 66-2-5378189 ext 152 Fax: 66-2-5378199 E-mail: lwicks@bangkok.icao.int

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LIST OF WORKING PAPERS (WPs) AND INFORMATION PAPERS (IPs)

WORKING PAPERS

NUMBER	AGENDA	TITLE	PRESENTED BY
WP/1	1	Provisional Agenda	Secretariat
WP/2	2	Draft Terms of Reference	Secretariat
WP/3	3	Air Traffic Flow Management (ATFM) Survey	Secretariat
WP/4	3	Global ATFM Manual	Secretariat
WP/5	5	Bay of Bengal ATFM Task List	Secretariat
WP/6	4	Draft APAC ATFM Concept of Operations	Secretariat

INFORMATION PAPERS

NUMBER	AGENDA	TITLE	PRESENTED BY
IP/1	-	List of Working Papers (WPs) and Information Papers (IPs)	Secretariat

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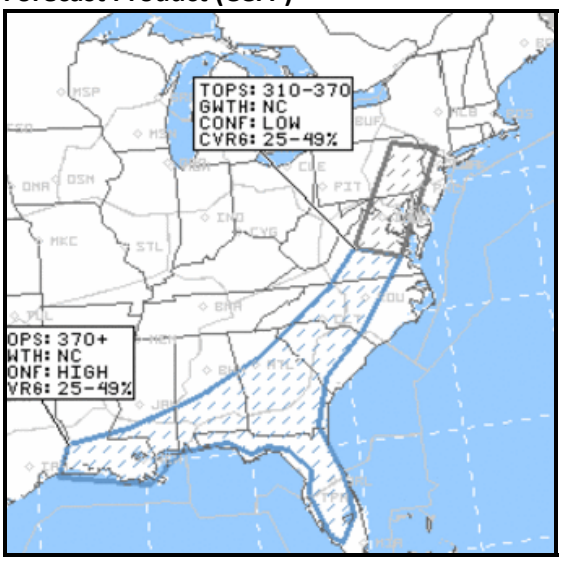
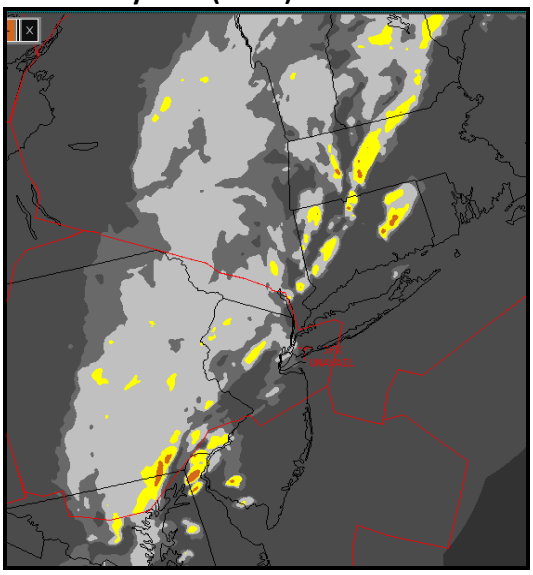
Flight & Weather Data
Common Situational Awareness
Decision Support Tools for Proactive Flight & Weather data
Common understanding

Collaborative Convective Forecast Product (CCFP)



- **Probabilistic**
- **2, 4, and 6 hour**
- **2 hour update rate**
- **March – Oct. only**
- **Areas depict regions of forecast weather with coverage and confidence**
- **Strategic decision aid**

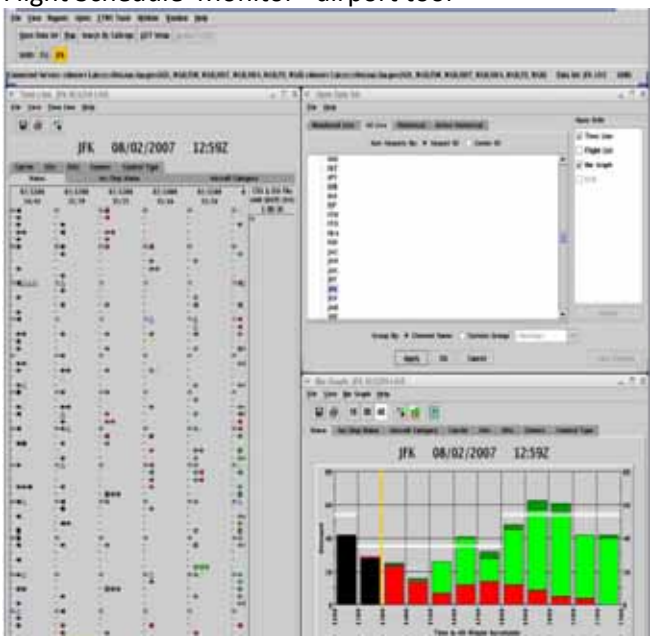
Corridor Integrated Weather System (CIWS)



- **Deterministic**
- **0-2 hour**
- **5 min update rate**
- **24/7/365 availability**
- **High resolution (1 km)**
- **Areas depict forecast weather**
- **Tactical decision aid**

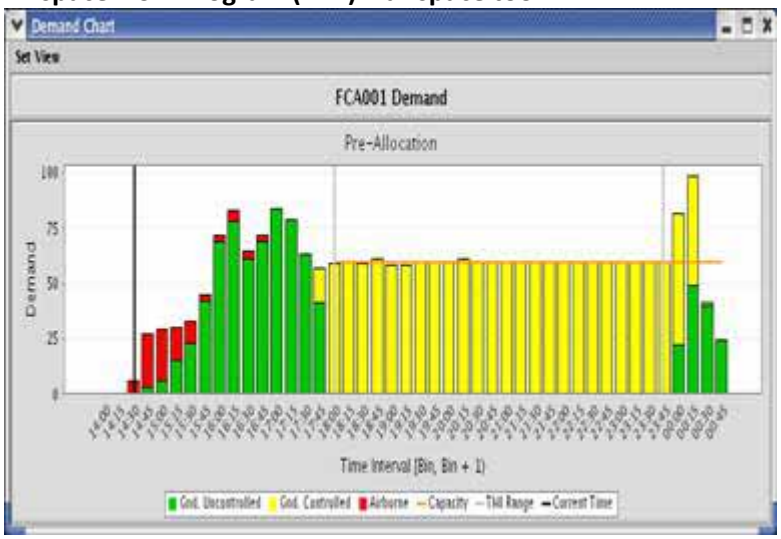
Monitor flows, predict delays, optimize responses -Enroute & Airport Flow Tools for flow management

Flight Schedule Monitor –airport tool



Allow assignment of departure delays in an automated format based on agreed upon algorithms ensuring fairness and equitability in assignment of delays among stakeholders

Airspace Flow Program (AFP) – airspace tool



The **Airspace Flow Program (AFP)** allows for formal Control Times to be issued to flights traversing a predefined area of airspace that is congested or constrained by severe weather or traffic congestion, while more accurately defining which flights need to be controlled.

Flight Planning changes, OIS & NTML Mgmt. Tools

- **Optimized plans**
- **Shared info & responses to System impacts**

The National Traffic Management Log (NTML)

provides single-point, automated collection, and real-time distribution of National Airspace System (NAS) operational data over the Traffic Flow Management System (TFMS). It modernized the previous FAA process for entering local traffic management facility operational data into multiple systems. We push this info to numerous systems, numerous stakeholders and some of it ends up on a web page which educates the flying public to issues in the Airspace system.

The Operational Information System (OIS)

NATIONAL PROGRAMS

CONTROL ELEMENT	START	END	SCOPE	REASON	AVG	AAR	PR	ADVZY
EWR	1800	0259	NOWEST+CZY_AP	WEATHER/LO CIGS	36	44	44	054
LGA	1400	0459	ALL+CZY_AP	WEATHER/LOW CIGS	33	38	38	037
PHL	1739	0159	NOWEST+CZY_AP	WEATHER/LOW CIGS	28	48	48	050

GROUND STOPS

ARPT	UPDATE	POE	SCOPE	REASON	ADVZY

DELAY INFO

ARPT	AD	DD	TIME	REASON
IAH	+15		2009	WX EN RTE

AIRPORT CLOSURES

ARPT	TIME	REASON	REOPEN

DEICING

ARPT	AAR/ADR	TIME

Runway/Equipment Info

This is not a complete list of Runway/Equipment Status. Please consult the current NOTAMs for complete information.

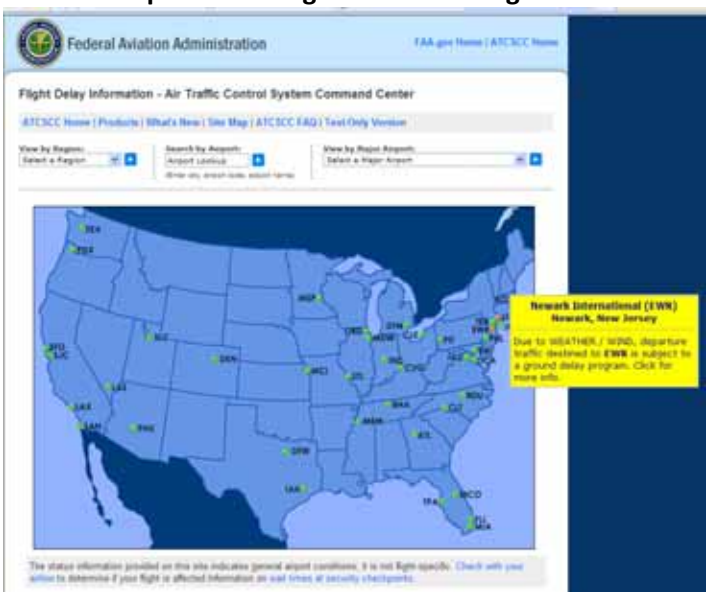
Facility	Description

MISCELLANEOUS

OP GRAPHICS AVAILABLE VIA CENTRA DURING TELCONS 1215Z-2215Z. CUSTOMERS HTTP://192.90.22.152 FAA-HTTP://10.112.23.151 FOR HELP CONTACT ATCSCC TECH SUPPORT @ (703)904-4434

provides real-time airport delay information as it is received from FAA facilities. The OIS system is a Web-based application that displays Ground Delay, Ground Stop, Deicing, and general airport delay information.

Web based products for general knowledge



- **Web application available to communicate with delays with FAA, Airlines, Military, and General public.**
- **Delay information automatically displayed and allows manual input**
- **XML version of data for news providers (Weather Channel, CNN, etc.)**

Feed by info from OIS and NTML

Event Analysis Tools for Real-time & historical performance

The Integrated Reporting Information System (IRIS)

Designed specifically to support post operations analysis and reporting of National Airspace System (NAS) performance by providing both high level information and statistics and the ability to drill-down to view flight details, flight tracks, flight plan history, and Traffic Flow Management System (TFMS) message history. IRIS supports the Collaborative Decision Making (CDM) community in its reporting and analytical efforts to eliminate unnecessary delay by identifying ways to improve program performance.

The Flight Schedule Analyzer (FSA)

LGA Performance

Flight List Generated at 1916z on 09/07/2006

Original Start Time: 16:00z

Hour	1600	1700	1800	1900	2000	2100	2200	2300	0000	0100
FSM Program Rate	**38**	**38**	**38**	**38**	**43**	**43**	**43**	**43**	**43**	**43**
Number of Assigned Slots	34	33	38	37	43	43	43	43	43	43
Flights Controlled by Another Initiative	0	0	0	0	0	0	0	0	0	0
Cancellations	-1	-0	-0	-1	-0	-0	-0	-0	-0	-1
Extra Demand	6	5	2	3	7	2	1	1	3	1
Flights Arriving Prior to Their Control Hour	-2	-4	-2	-1	-3	-5	-1	-0	-0	-0
Flights Arriving After Their Control Hour	-2	-1	-0	-0	-1	-1	-0	-2	-1	-0
Total Current Demand	**35**	**33**	**38**	**38**	**46**	**39**	**43**	**42**	**45**	**43**
Number of Unassigned Slots	0	0	0	0	0	0	0	0	0	0
Total Potential Demand	**35**	**33**	**38**	**38**	**46**	**39**	**43**	**42**	**45**	**43**

Consists of Post-Analysis FSA (PA-FSA) and Real-Time FSA (RT-FSA). PA-FSA is an analysis tool used by the Traffic Flow Management (TFM) community to assess the performance of ground delay programs (GDPs) on a next-day basis.