Air Traffic

Flow Management

Presented to: MIT

- By: FAA Command Center
- Date: October 5, 2006



Briefing Overview

• Why use ATFM?

 Benefits derived from Air Traffic Flow Management (ATFM) and the Collaborative Decision Making (CDM) process.

• Who is involved?

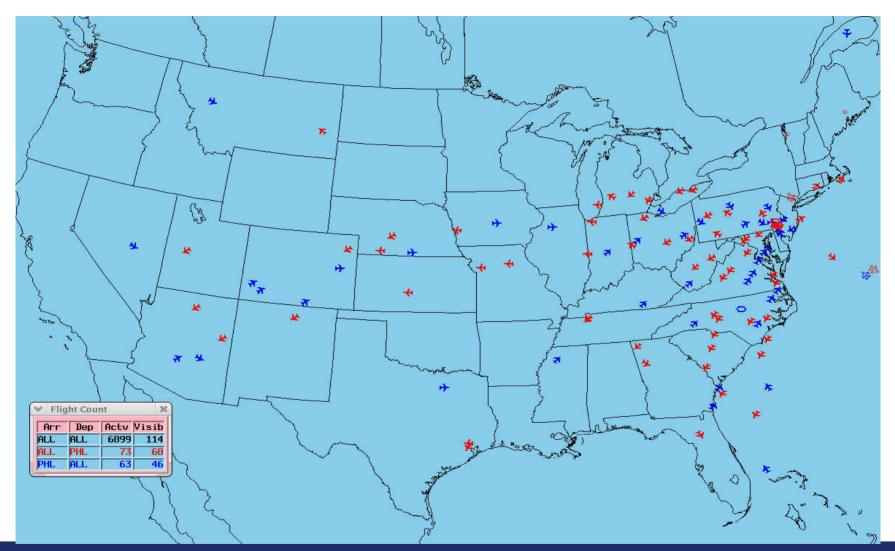
- Air Traffic Organization
- Customer
 - Civil
 - Military

• How is ATFM applied?

- Planning and coordination
- Automated tools and procedures



PHL Arrivals and Departures



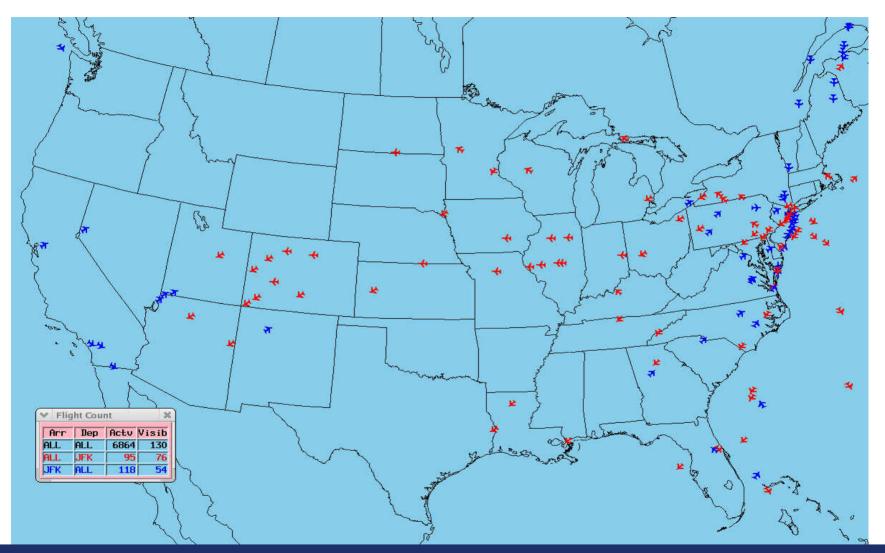


EWR Arrivals and Departures



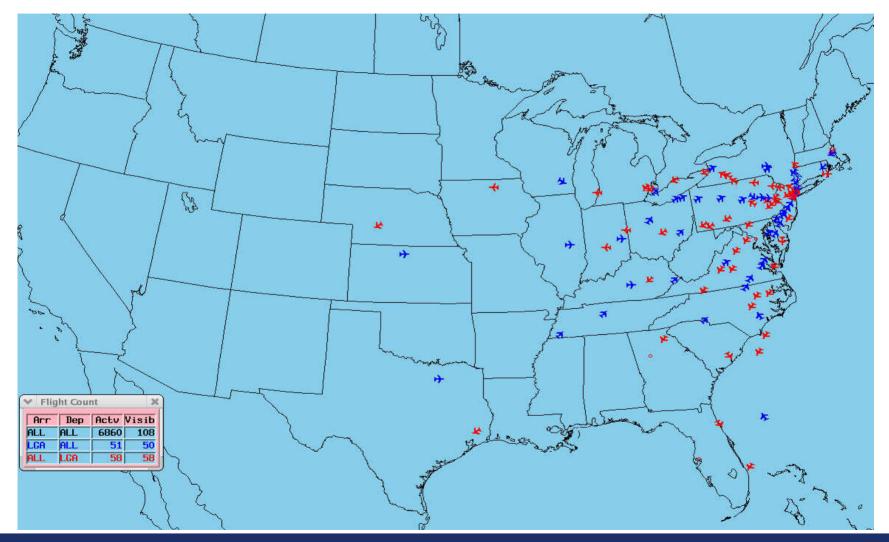


JFK Arrivals and Departures



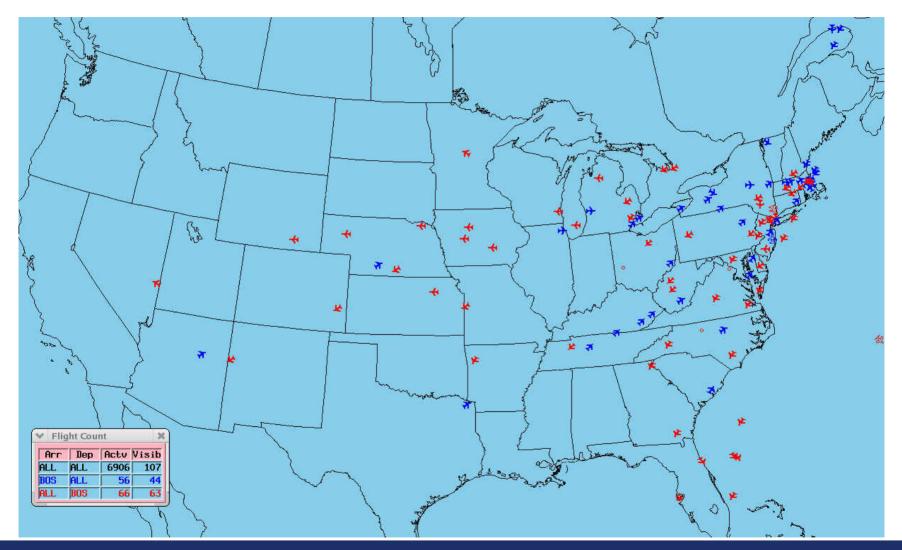


LGA Arrivals and Departures



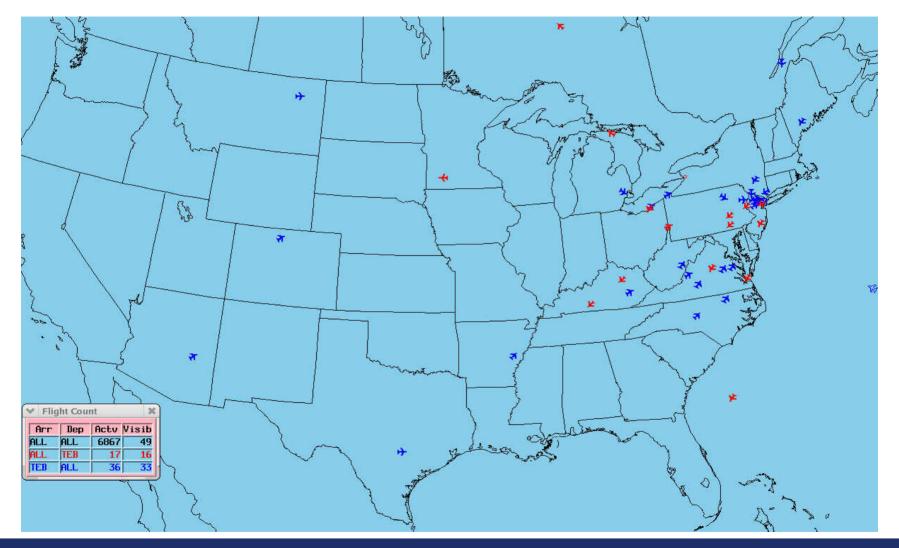


BOS Arrival and Departures



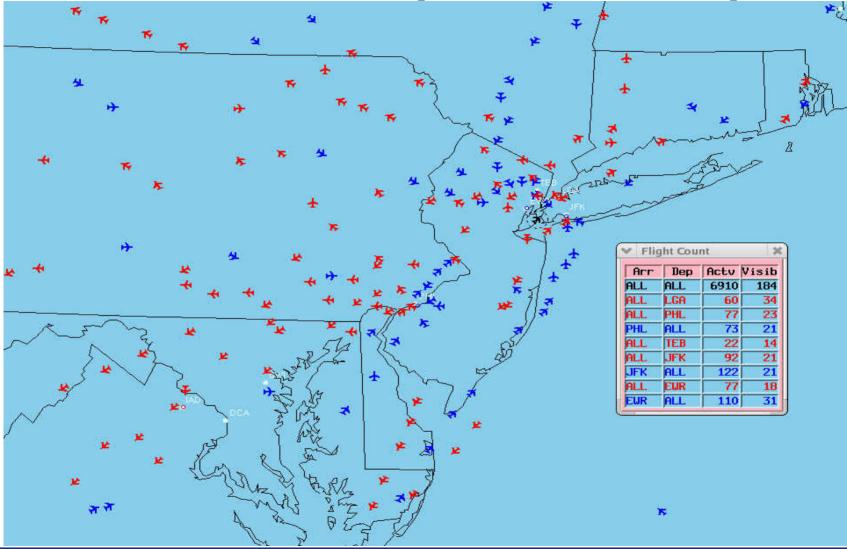


TEB Arrival and Departures



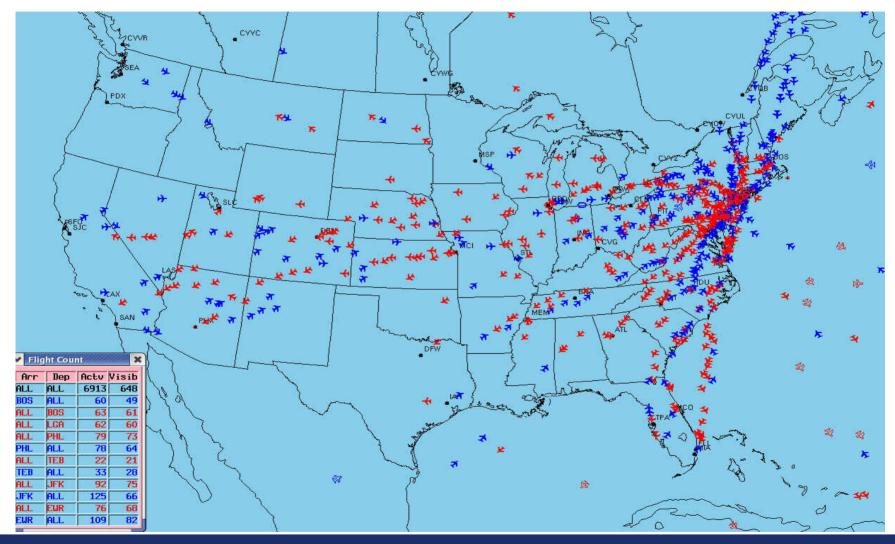


Northeast Airports Close Up



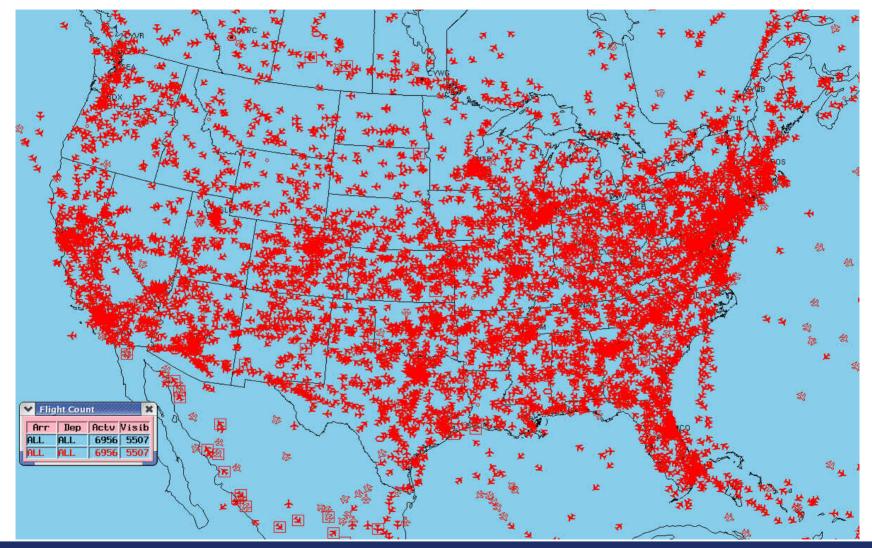


Northeast Airports Arrivals and Departures



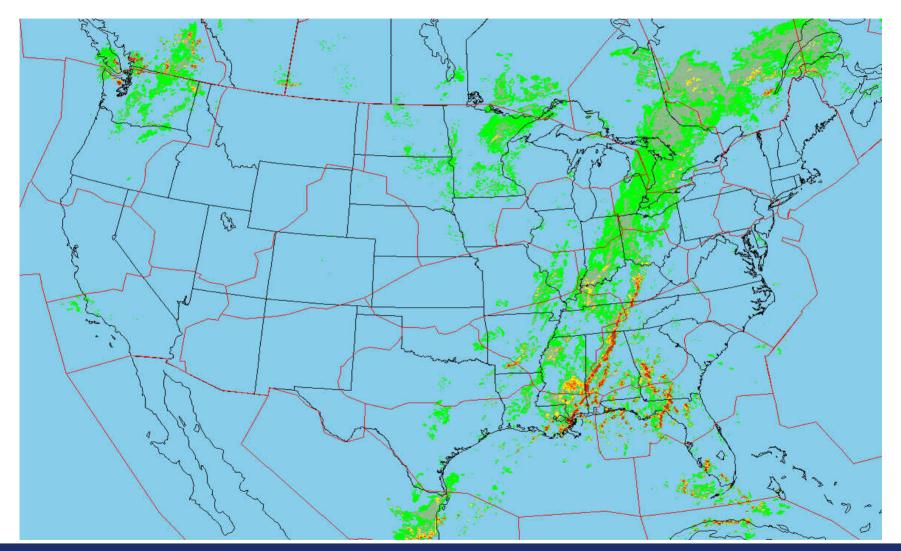


All Traffic



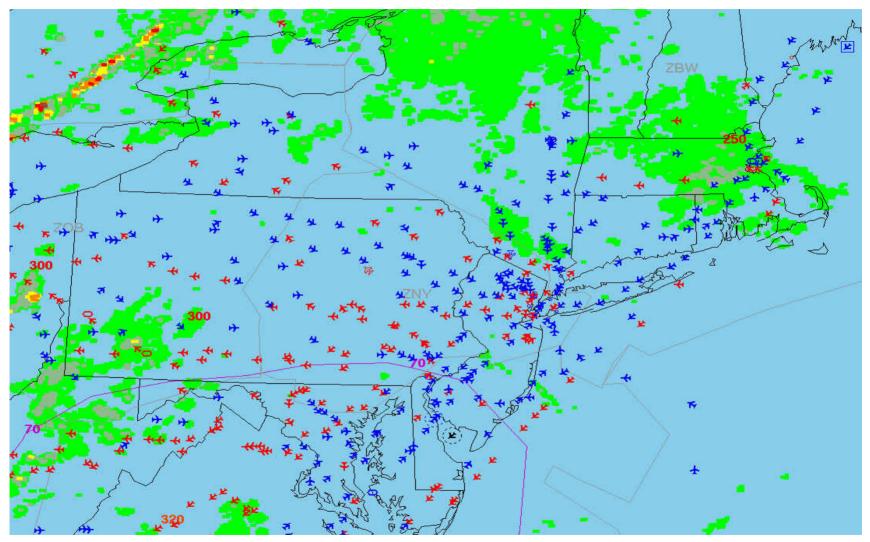


Convective Weather



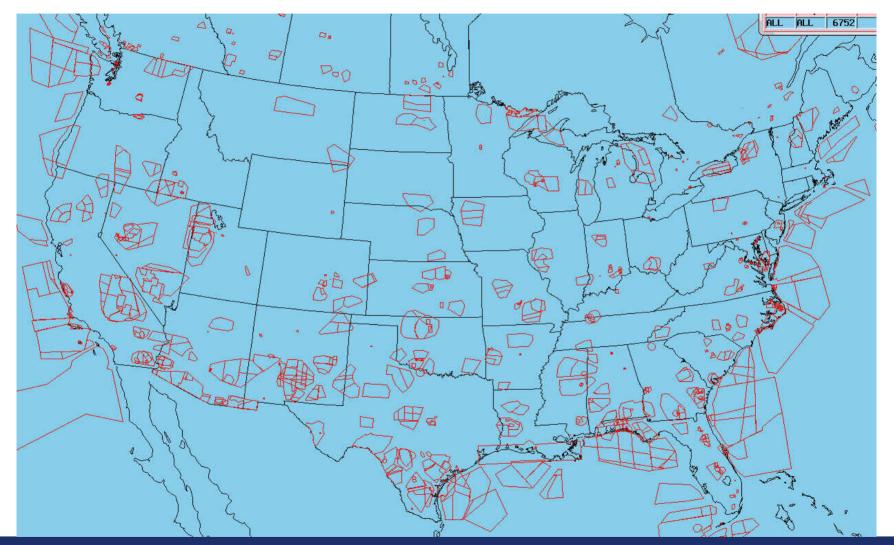


All Northeast Airports with Weather





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

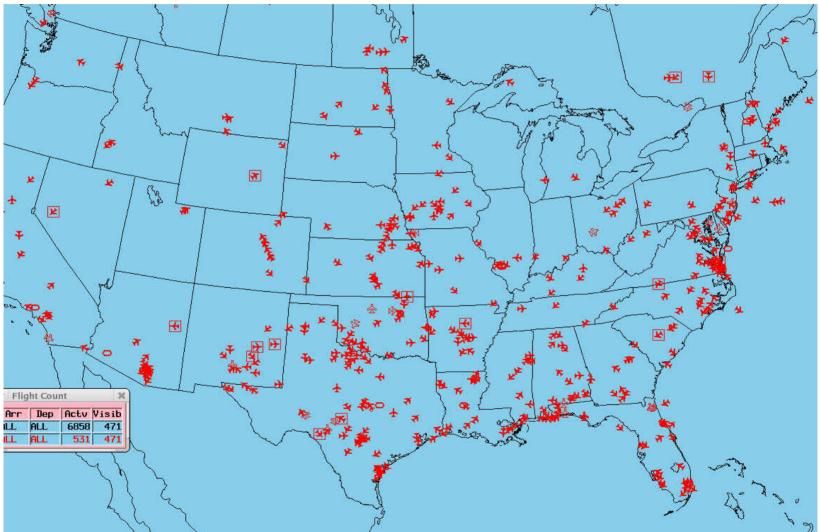


The Military as a Customer

- 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



Military Aircraft





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

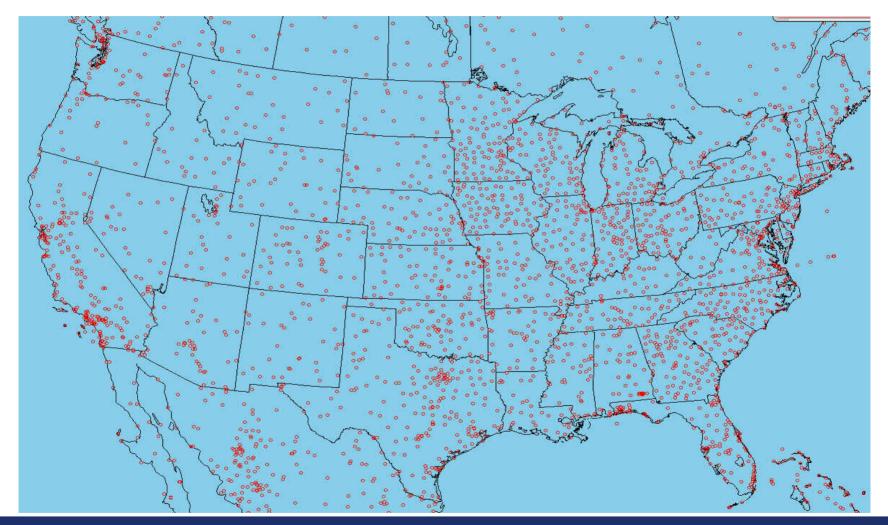


Who's Involved

- Terminal/TRACON
- Enroute
- Command Center
- Director Tactical Operations
- Customers
 - Civil
 - Military



Approx. 5,000 Airports125 FAA staffed235 Federal Contract



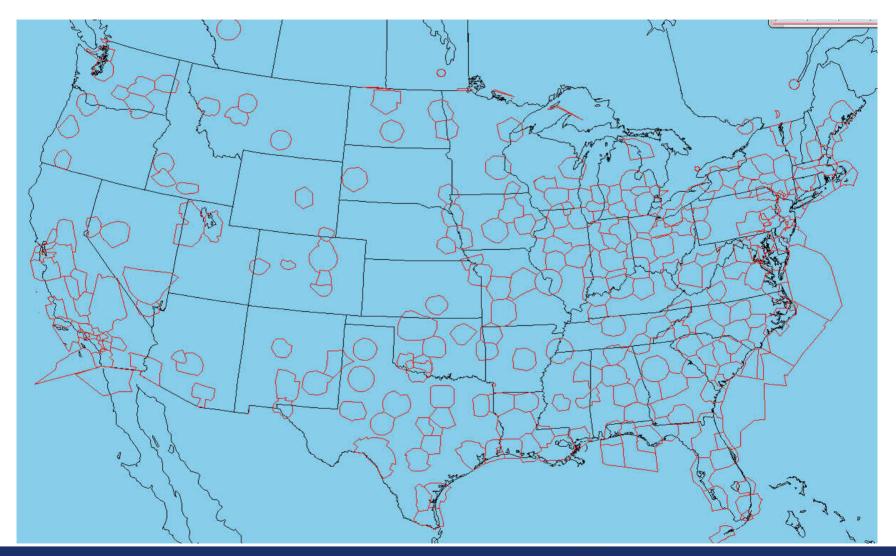


35 Primary Airports



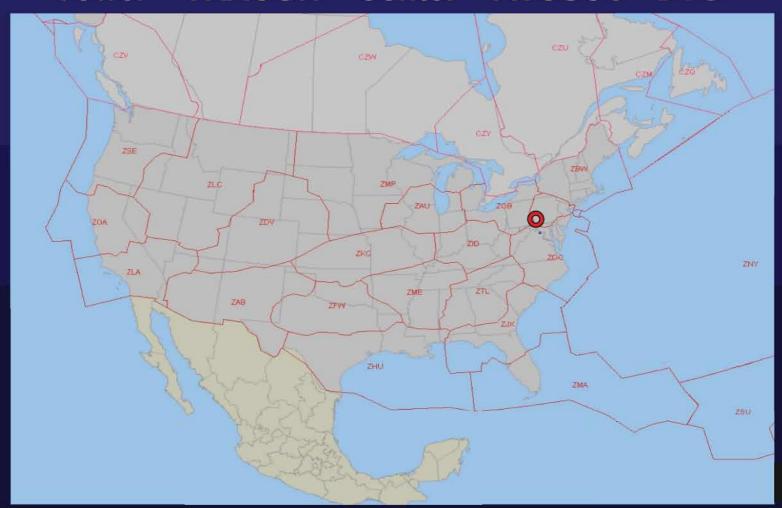


Approx. 170 TRACONs





Air Traffic Hierarchy Tower – TRACON – Center – ATCSCC - DTO



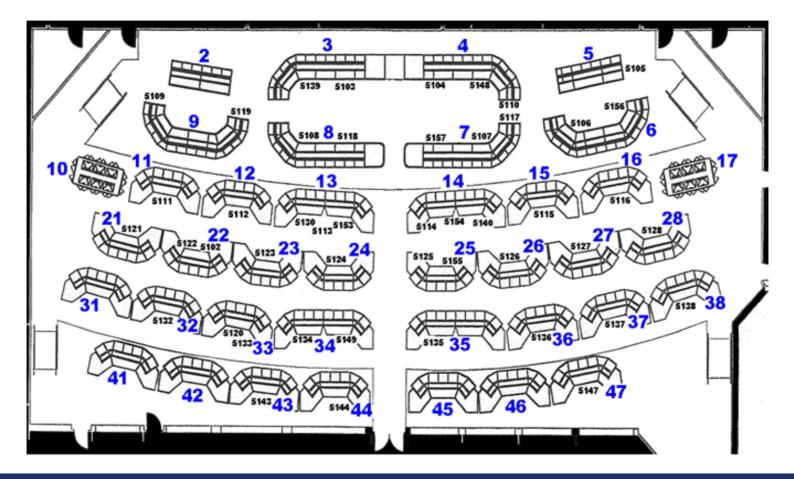


Air Traffic Organizational Structure

- 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 (ATCSCC)



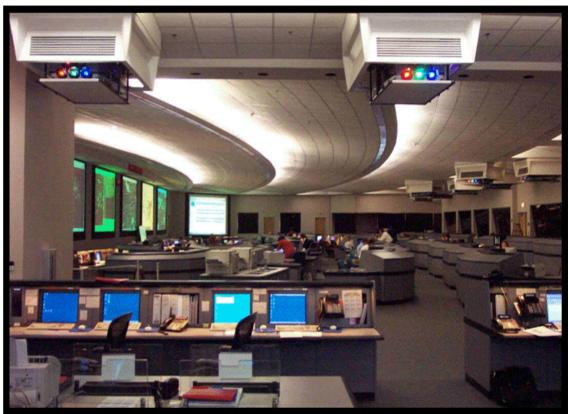


Applying ATFM

• 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

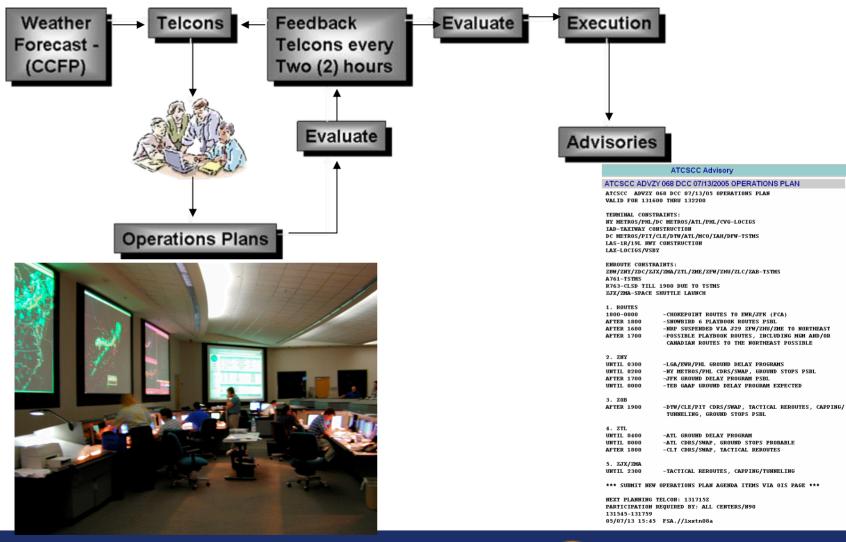


Collaborative Convective Forecast Product



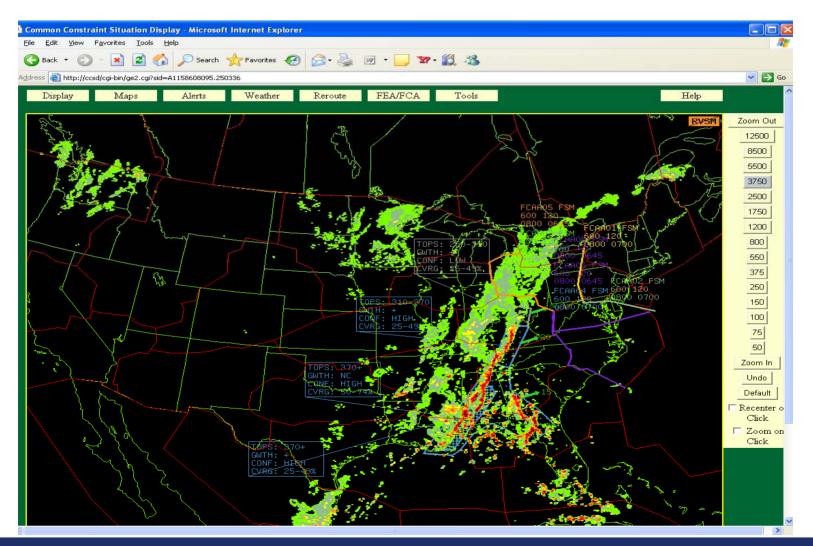


Planning Process



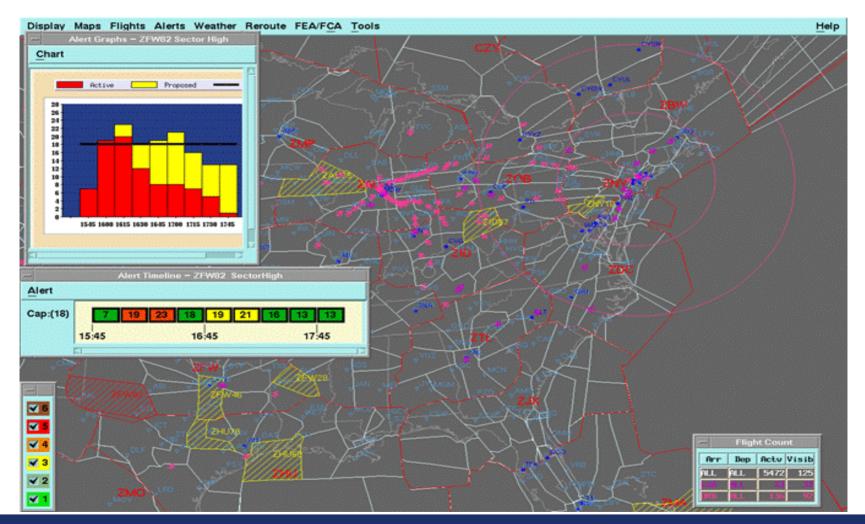


Common Situation Display



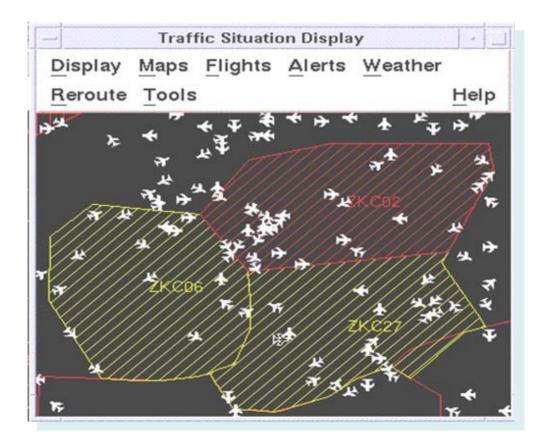


Enhanced Traffic Management System (ETMS)



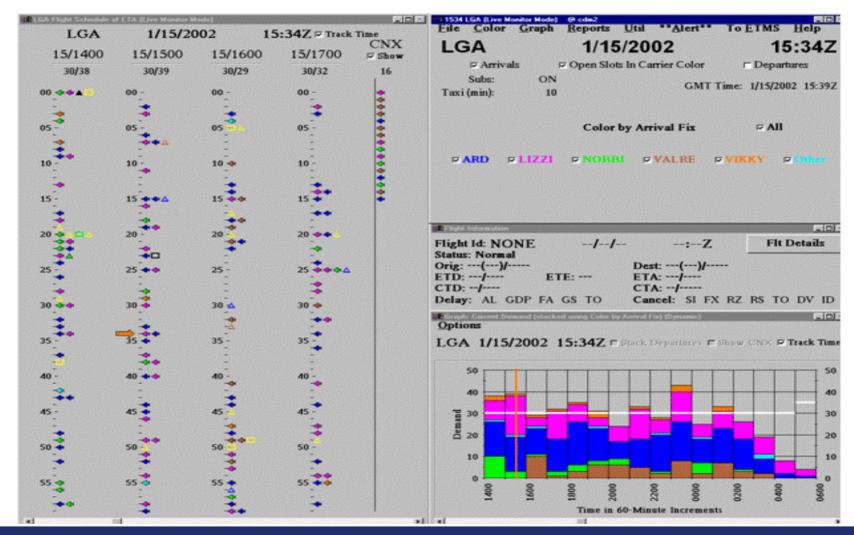


Enhanced Traffic Management System (ETMS)





Flight Schedule Monitor



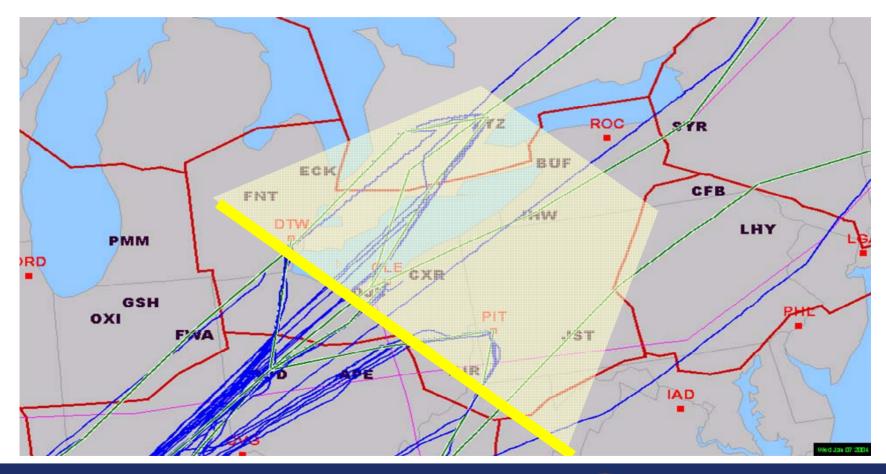


Flow Evaluation Area/Flow Constrained Area

- 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

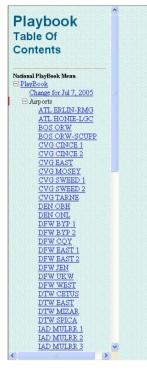


Flow Evaluation Area





National Playbook



Air Traffic Control System

Command Center



National Severe Weather

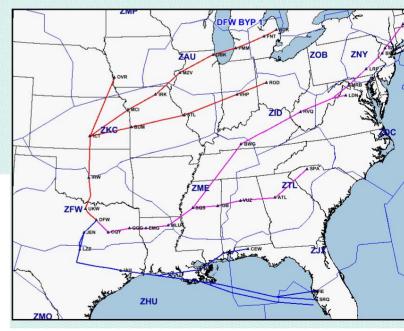
Playbook

DFW BYP 1

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 ARI VIA THE FOLLOWING ROUTES. SUBSTITUTE OTHER DESTINATION IN PLACE OF DFW IF APPLICABLE





Coded Departure Routes (CDRs)

tosta Code Origin/Dep Center Destination/Arr Center Departure Fix Date/Time any any any any any any any any any any	CDR Tool												ď
Notice Destination Arr Conter Department Rix Date Time Date Time Date Time Date Time Date Time Date Time Department Rix Date Time Date Time Date Time Department Rix Date Time Department Rix Date Time Date Time Date Time Date Time Department Rix Date Time						27 Dec 2	001						
Diright Dep Center Destination/or Center Departure for Date Time inter inter inter Marking Marking Marking Marking inter inter inter Marking													
Internation Data Monthly Properation Properation Internation Search 10 March	Duery Fields:	Operational											-Oatabase
Internation Data Monthly Properation Properation Internation Search 10 March	oute Code		Origin	Dep Centr	r Destination/Arr Cent	ter De	sparture Fix		D	ate/Time			120220
Base String Remarks Modility Darr Carr Standing													· Operation
Dury Date Description Description <thdescription< th=""> Description <thdescripti< td=""><td>and a String</td><td></td><td>party</td><td>CIUNI 20022</td><td></td><td></td><td>000000000000000000000000000000000000000</td><td>No. 13 12 13 13</td><td>0020000000</td><td>000000000000</td><td></td><td>Modifian</td><td>- operado</td></thdescripti<></thdescription<>	and a String		party	CIUNI 20022			000000000000000000000000000000000000000	No. 13 12 13 13	0020000000	000000000000		Modifian	- operado
Dury Date Description 20112271119023 KNORTWARD LEWIN CONTR CON	oute sering	202000000	1993 2019 11919	691152302	- I - I	NEL IN S		19.19.19.Ap	00000000000		4920103003	heodering	1222223
Classify Ricke Origit Desk Route String Desk Desk ACMIN Modelsg Remarks 001-12/21 150/28 EVRIFORMED	Increased in the												Staging
Time Product Origit Dead Restance Restance Dead to Dead to <thdead th="" to<=""> <thdead th="" to<=""> <thdead t<="" td=""><td>Query C</td><td>48</td><td></td><td></td><td></td><td>Send to Map</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1969999</td></thdead></thdead></thdead>	Query C	48				Send to Map							1969999
0011-12 21 11 50:28 EVENOPY EVENT EVENT<	Juery Result	: Operation	al										
0011-22 21 1502 EVROPOWNE KEWR KORV KEWR KEWR<							and second from				ModFlag	F	temarks
0011-227 11502 EVROPTWO KEWR EVROPT KEWR EVROPT KEWR EVROPTWO EVROP	Colorisation and provide the second	and the second se	and the second second second								-		
Dit1-227 11 50:28 ENRIFORMAL EVENT EVENT ENVIRENCE							v						
101-12/27 11:50/28 EVMODVV0 KEVMR KEVMR KEVMR BIOOR VJ75 690 J1 4 VUZ J52 505 COVS KEVM BIOOY ZPV ZPV ZPV 101-12/27 11:50/28 EVMODVV/5 KEVMR KEVMR BIOOV J75 690 J1 4 VUZ J52 505 COVS KEVM BIOOY ZPV <											t		
D011-12/21 11:50:26 EWRIDPWTS NEWR NDFW KEWR BIOD // 37:50:50:14:402:43:50:80:COV BIOOV ZIV ZIV D011-12/21 11:50:26 EWRIDPWR5 KEWR KDOT /// SCHUD ///							1000 106 1						
Dit1221115026 EWRDPW80 KEWR KDPW KEWR BLOT 30 PTLL5 325 PWJ 131 LT BYP4 KDPW ELOT ZPW Dit1221115026 EWRDPW80 KEWR BLOT 30 PTLL5 325 PWJ 131 LT BYP4 KDPW BX007 ZPW Dit1221115025 EWRDPW87 KEWR BLOT 30 PTL3 50 KE 37 SPA J14 VUZ J14 LT BYP4 KDPW BX007 ZPW Dit1221115025 EWRDPW87 KEWR KDPW							APL 9 APD 9				0		
Diol-12.27 Diol											6		
101-12-27 11 50:25 EWROPW07 KEWR KDWR KDWR KEWR KDWR KDWR KEWR KEW											-f		
101-12-27 11 50:25 EVARDEWIGE KEWRE KICHR KEWRE KICHR KEWRE KICHR KICH											-		
1011-12:21 EVRIDEWICH KEWR KOFW KEWR GREI0 V15 JUDIS CANJGT 22 PKV J13 LLT BYP4 KDPW GREI0 ZIV ZIV PW 1011-12:21 KEWR DYWCH KEWR KOFW KEWR WHTE J203 ORF J174 CHS J40 MGN J4 JAN ELD T0K BYP4 KDPW PMRE ZIV ZIV PW 1011-12:21 KEWR DYWLS KEWR KOFW KEWR PARKE J8 BWO 306 AUL K CWK LZZ JIN JINS KDPW PARKE ZIV ZIV ZIV 1011-12:21 KEWR PARKE J8 BWO 306 AUL K CWK LZZ JIN JINS KDPW PARKE ZIV ZIV ZIV 1011-12:21 KEWR PARKE J8 BWO 306 AUL K CWK LZZ JEN JINS KDPW PARKE ZIV ZIV 1011-12:21 KEWR PARKE J8 BWO AND AUL K CWL ZZ JEN JINS KDPW PARKE ZIV ZIV ZIV 1011-12:21 KINDEWIA KEWR KDFW KEWR WHTE J209 SIR JINS KDFW WHITE ZIV							KDFW				-		
2011-12-27 11:50:24 EVRIDPAUS KEWR KDPW KEWR PARKE ZHY ZHY ZHY ZHY D 2011-12-27 11:50:23 EVRIDPAUS KEWR KDPW KEWR RARCE 35 BWR DEVUS KEWR KDPW KEWR FARKE 35 BWR DEVUS KEWR FARKE 32 FWR DEVUS KEWR FARKE 35 BWR DEVUS FARKE 32 FWR DEVUS				KDFW					ZNY	ZEW			
2011-2.27 11:50:23 EVRIDENUS KEWR KDPW KEWR PARKE ZNY ZPW - 2011-12:27 11:50:23 EVRIDENUS KEWR KDPW KEWR FUT LIV ZPW - 2011-12:27 11:50:23 EVRIDENUS KEWR KDPW KEWR WHTE 1209 GPF 174 LIV LIV ZPW - 2011-12:27 11:50:22 EVRIDENUS KEWR KDPW KEWR WHTE 1209 GPF 174 LIV LIV ZPW - 2011-12:27 11:50:22 EVRIDENUS KDPW KEWR WHTE 1209 GPF 174 LIV LIV ZPW - 2011-12:27 11:50:22 EVRIDENUS KDPW KEWR WHTE 1209 GPF 174 LIV LIV ZPW - 2011-12:27 11:50:21 EVRIDENUS KDPW KDPW KDPW KDPW KDPW ZPW - 2011-12:27 11:50:21 EVRIDENUS KDPW KDPW KDPW KDPW ZPW - - - ZPW - - ZPW - - ZPW - ZPW - ZPW	001-12-27 11:5	24 EWRDFV	ICH KEWR	KDFW	KEWR WHITE J209 ORF J174 CHS J40 M	GM J4 JAN ELD TXK B	YP4 KDFW	WHITE	ZNY	ZFW			
1011-12:21 EVMIDEVUS KEWR KEWR KURW KEWR KURW KEWR KURW	001-12-27 11:50	24 EWRDEV	US KEWR	KDFW	KEWR PARKE J6 BWO SQS AEX LFK CW	CLZZ JEN JENS KDPV	v	PARKE	ZNY	2FW	-		
00112.2711150.23 EVMIDENVUS KEWR KEWR VMTTE 2014 VMTTE ZVV ZVV V 00112.2711150.22 EVMIDENVUS KEWR KEWR VMTTE Z016 ZVV ZVV ZVV V 00112.2711150.22 EVMIDENVEN KEWR KEWR VMTTE Z016 ZVV ZVV ZVV V 00112.271150.22 EVMIDENVEN KEWR KEWR KEWR KEWR KEWR VMTTE ZVV ZVV V 00112.271150.22 EVMIDENVEN KEWR KEWR KEWR KEWR KEWR KEWR KEWR KEWR KEWR ZVV <	001-12-27 11:50	23 EWRDEV	US KEWR	KDFW	KEWR PARKE J6 BWG ARO FSM BYP4 KD)FW		PARKE	ZNY	ZEW	-		
101-12-27 11:50:22 EWROPTWAX KEIWR KOFW KEIWR WHTE J209 BIY J19 KATZN J19 UKATZN	001-12-27 11:50	23 EWRDFV	US KEWR	KDFW	KEWR WHITE J209 ORF J174 ILM J4 CAE	J52 SQS AEX LFK CV	K LZZ JEN J.	WHITE			-		
001-12-27 11:50:22 EWROPAUM KEWR KEWR KEWR PARKE JS LIT BYP 4 KDFW PARKE ZPV ZPV 001-12-27 11:50:21 EWROPAWH KEWR KDFW KEWR PARKE JS LIT BYP 4 KDFW PARKE ZPV 001-12-27 11:50:21 EWROPAWH KEWR KDFW KEWR PARKE JS LIT BYP 4 KDFW PARKE ZPV 001-12-27 11:50:21 EWROPAWS KEWR KDFW KEWR PARKE JS LIT BYP 4 KDFW PARKE ZPV ZPW 001-12-27 11:50:21 EWROPAWG KEWR KDFW KEWR ELOI DJ BJ DI DOD JJ BJIL DWO SDG COYS KDFW ELOT ZPV ZPW 001-12-27 11:50:21 EWROPAWG KEWR KDFW KEWR ELOI JBB JJ RO DJ JBJIL DWO SDG COYS KDFW ELOT ZPV ZPW 001-12-27 11:50:20 EWROPAWG KEWR KDFW KEWR ELOI JBB JJB DYW JJJJIL TBYP4 KDFW ELOT ZPV ZPW 001-12-27 11:42:44 HPNOFW6B KHWR KDFW KHWR LANA, J48 MOLJZ 2V/V J48 BRA J48 J6 LIT BYP4 KDFW ELOT ZPV ZPW 001-12-27 11											-		
12.27 11.5022 EWRDFYNEH KESWR KEWR FARKE JUL 12.27 11.5021 EWRDFYNOS KEWR KDFW KEWR FARKE JUL 12.27 11.5021 EWRDFYNOS KEWR KDFW KEWR KDFW KEWR KDFW KEWR KDFW KEWR KDFW KEWR KDFW FARKE JUL 12.27 11.5021 EWRDFYNOS KEWR KDFW KEWR KDFW KEWR FARKE JUL 12.27 11.5021 EWRDFYNOS KEWR KDFW KEWR FARKE JUL 12.27 11.5021 EWRDFYNUS KEWR KDFW KDFW <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>CAE J52 TX</td><td></td><td></td><td></td><td>-</td><td></td><td></td></td<>							CAE J52 TX				-		
001-12-27 11 50:21 EVRIDE/WOS KEWR KDFW KEWR LANNA J48 MOL J22 VUZ J52 S08 C0Y5 KDFW LANNA ZhY ZhV - 001-12-27 11 50:21 EVRIDE/WOS KEWR KDFW KDFW KDFW KDFW PRRDI ZhV ZhV - 001-12-27 11 50:21 EVRIDE/WOS KEWR KDFW KDFW KEWR LDT ZhV ZhV - 001-12-27 11 50:21 EVRIDE/WOS KEWR KDFW KEWR ELIDT J80 J0T M2// RXJ28 KT IRW UMWY KDFW ELIDT ZhV ZFW - 001-12-27 11 50:21 EVRIDE/WUS KEWR KDFW KEWR ELIDT J80 J0T M2// RXJ28 KT IRW UMWY KDFW ELIDT ZhV ZFW - 001-12-27 11 42:44 HPNDFWJS KHWR KDFW KEWR ELIDT J80 J48 J12 J11 J11 J11 J11 J11 J11 J11 J11 J11						J52 TXK BYP4 KDFW					·		
001-12-27 11:50:21 EVMRDTW06 KEIWR KDPW KEIWR PARKEI, 38 8W 906 00/5 KDPW PARKEI ZhY ZhY - 001-12-27 11:50:21 EVMRDTW05 KEWR KDDT JAD 21 90 00 J38 IU BWO SQ6 C0/5 KDPW EUDT ZhY ZhY - 001-12-27 11:50:21 EVMRDTW05 KEWR KDDT W KEWR EUDT JAD 21 50 00 TMZ / IRS, ZS ICT IRW UKWY KDFW EUDT ZhY ZFW - 001-12-27 11:50:20 EVMRDTW05 KEWR KDDT W KEWR EUDT JAD 21 50 00 TMZ / IRS, ZS ICT IRW UKWY KDFW EUDT ZhY ZFW - 001-12-27 11:50:20 EVMRDTW05 KEWR KDDT WO CART JAD 9W AVAIE1 JAD 9W MAIE1 JAD 11 TB 19P4 KDFW EUDT ZhY ZFW - 001-12-27 11:42:44 HNDDFW86 KHPN KDFW KHPN EUDT J30 DLB J39 FWJ J31 LIT BYP4 KDFW EUDT ZhY ZFW - 001-12-27 11:42:44 HNDDFW86 KHPN KDFW KHPN EUDT J30 DLB J39 FWJ J31 LIT BYP4 KDFW EUDT ZhY ZFW - 001-12-27 11:42:44 HNDDFW86 KHPN KDFW KHPN EUDT J30 DLB J39 FWJ J31 LIT BYP4 KDFW EUDT ZhY ZFW											-		
001-12-27 11:50:21 EWRDPW07 KEWR KDDT W KEWR EUDT 30 DUB J29 ROD J39 IU 900 606 COYS KDPW EUDT ZhY ZPW > 001-12-27 11:50:21 EWRDPW06 KEWR KDDT J60 J07 J08 UND KDPW EUDT ZhY ZPW > 001-12-27 11:50:20 EWRDPW06 KEWR KDPW KEWR ELIDT J80 UND J80 UND J26 ETT IRW UNWY KDPW ELIDT ZhY ZPW > 001-12-27 11:42:46 HMDDFW08 KHPN KDPW KEWR ELIDT J80 UND J36 UND J37 UND VIG ENA J46 ENA J40 UND ZWW COATE ZhY ZPW > 001-12-27 11:42:46 HMDDFW08 KHPN KDPW KHPN ELIDT J80 UND J37 UND J46 ENA J46 UND J37 UND J46 ENA J46 UND J37 UND J46 ENA J46 UND J47 UND J46 ENA J47 UND J46 UND J47 UND J46 ENA J47 UND J46 ENA J47 UND J46 UND J47 UND J46 ENA J47 UND J47		and the second se				CGY5 KDFW					÷		
001122711522 EWRDPWUG KEWR KDW KEWR EUDT J60 JOT M2V IRK J26 ICT IRW UKWR KDFW EUDT ZhY ZhW > 001-1227115206 EWRDPWUG KEWR KDDT JA2 ST 115020 EWRDPWUG KEWR FWD > 001-1227115206 EWRDPWUG KEWR KDDT JA2 ST 115206 EWRDPWUG CATE ZhY ZFW > 001-1227115206 HPNDPWG KDPW KHPN CONT SHWN CATE ZhY ZFW > 001-1227115246 HPNDPW60 KHPN CONT SHWN CATE ZhY ZFW > 001-1227115245 HPNDPW60 KHPN KDPW KHPN LUDT J80 DJB J29 PWJ J31 LT BYP4 KDPW EUDT ZhY ZFW > 001-1227115244 HPNDPW60 KHPN KDFW KHPN EUDT J80 DJB J29 PWJ J31 LT BYP4 KDFW EUDT ZhY ZFW > 001-1227115244 HPNDFW60 KHPN KDFW KHPN EUDT J80 DJB J29 PWJ J31 LT BYP4 KDFW EUDT ZhY ZFW > 001-1227115244 HPNDFW60 KHPN KDFW													
001-12-22 11:52:02 EWRDPVUB KEWR KEWR KEWR EUDT 30 VHP 324 STL 1/31 CT BIP4 KDFW EUDT 27/Y 27/W - 001-12-22 11:42:45 HPNDPW86 KHPN KDPW KDPW KDPW KDPW KDPW COATE 27/Y 27/W - 001-12-22 11:42:45 HPNDPW86 KHPN KDPW KDPW KDPW KHPN LANNA, 446 M0L 322 V/V, 346 BNA, 345 J0 LT BIP4 KDPW EUDT 27/Y 27/W - 001-12-22 11:42:44 HPNDPW86 KHPN KDPW KHPN EUDT 380 DJB 329 P/V 3131 LT BIP4 KDPW EUDT 27/Y 27/W - 001-12-22 11:42:44 HPNDPW86 KHPN KDPW KHPN EUDT 380 DJB 329 P/V 3131 LT BIP4 KDPW EUDT 27/Y 27/W - 001-12-22 11:42:44 HPNDFW86 KHPN KDPW KHPN EUDT 380 P/L3 29 P/V 3131 LT BIP4 KDPW EUDT 27/Y 27/W - 001-12-22 11:42:41 HPNDFW86 KHPN KDPW KHPN EUDT 380 P/L3 29 P/V 3131 LT BIP4 KDPW EUDT 27/Y 27/W - 011-12-21 1:42:41													
111-12-27 111-12-27 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>													
101-12-27 11.42.45 HPNDFW8B HHPNDFW8B											-E		
1011-1227 11:42:44 HPNDFW6B KHPN KDFW KHPN ELDOT J8D DJ8 J29 PXV.J131 LT BYP4 KDFW ELDOT ZhY ZhW > 1011-1227 11:42:44 HPNDFW6B KHPN KDFW KHPN ELDOT ETX RAV J84 J29 PXV.J131 LT BYP4 KDFW ELDOT ZhY ZhW > 101-1227 11:42:44 HPNDFW6B KHPN KDFW KHPN ELDOT ETX RAV J84 J29 PXV.J131 LT BYP4 KDFW ELDOT ZhY ZhW > 101-1227 11:42:42 HPNDFW6B KHPN KDFW KHPN ELDOT J80 F1LS.J29 PXV.J31 LT BYP4 KDFW ELDOT ZhY ZHV > 101-1227 11:42:41 HPNDFW6B KHPN KDFW KDFW KHPN ELDOT J80 F1LS.J29 PXV.J31 LT BYP4 KDFW ELDOT ZhY ZFW > 101-1227 11:42:41 HPNDFW6B KHPN KDFW KHPN EAKE_J8 COLKS J134 STL, R22 F8K M174 KDFW PARKE ZhY ZFW > 101-1227 11:42:41 HPNDFW6B KHPN KDFW KHPN KAKE_J8 COLKS J134 STL, R22 F8K M174 KDFW PARKE ZhY ZFW > 101-1227 11:42:41 HPNDFW6B KHPN KDFW KHPN KAKE_J9 OFF J131 LILM J4C CAE J32 ATLJ14 LT BYP4 KDFW </td <td></td> <td>and the second second second second</td> <td>and the second se</td> <td></td> <td></td> <td>the second se</td> <td>6</td> <td></td> <td></td> <td></td> <td>- [</td> <td></td> <td></td>		and the second second second second	and the second se			the second se	6				- [
2011-12-27 11:42:44 HPNDFW84 IOHPN KDFW IOHPN ELDIT ETX RAV J54 J29 PXV J131 LIT BYP4 KDFW ELDIT ZHY ZFW - 2011-12-27 11:42:43 HPNDFW75 IOHPN KDFW IOHPN ELDIT 30 G00 J15 G00 J14 VUZ J52 G00 G0% KDFW BID00Y ZHY ZFW - 2011-12-27 11:42:43 HPNDFW85 KOHPN KDFW IOHPN ELDIT 300 FVLL3:29 PXV J131 LIT BYP4 KDFW ELDIT ZHY ZFW - 2011-12-27 11:42:44 HPNDFW85 KHPN KDFW KHPN BID07 J15 GVE J13 STR J14 VUZ J14 LIT BYP4 KDFW BIG0Y ZHY ZFW - 2011-12-27 11:42:41 HPNDFW85 KHPN KDFW KHPN BID07 J15 GVE J13 STR J14 VUZ J14 LIT BYP4 KDFW BIG0Y ZHY ZFW - 201-12-27 11:42:41 HPNDFW85 KHPN KDFW KHPN KDFW KHPN KDFW PARKE ZHY ZFW - 201-12-27 11:42:41 HPNDFW85 KDFW KHPN KDFW KHPN KDFW PARKE ZHY ZFW - 201-12-27 11:42:41 HPNDFW85 KDFW KHPN KDFW KDFW KDFW <td></td> <td>- [</td> <td></td> <td></td>											- [
101-12-27 11.42-43 HPNDFW65 GMPN KDFW GMPN BLOOV J75 G80 J14 V02,352 G80 G05 KDFW B000Y ZNY ZNW - 101-12-27 11.42-43 HPNDFW86 KMPN KDFW RHPN EUOT J80 F1LLS J29 PXV J131 LIT BYP4 KDFW EUOT ZNY ZFW - 101-12-27 11.42-41 HPNDFW86 KMPN KDFW RHPN EUOT J80 F1LLS J29 PXV J131 LIT BYP4 KDFW BIGGY ZNY ZFW - 101-12-27 11.42-41 HPNDFW86 KMPN KDFW RHPN EM60Y J75 G%E J37 BFA.14 V02 J14 LIT BYP4 KDFW BRGY ZNY ZFW - 101-12-27 11.42-41 HPNDFW86 KMPN KDFW KMPN EM60Y J37 G%E J37 BFA.14 V02 J14 LIT BYP4 KDFW PARKE ZNY ZFW - 101-12-27 11.42-41 HPNDFW86 KMPN KDFW KMPR K48E J50 G9 GFE J14 LIM J44 CAE J52 ATJ J14 LIT BYP4 KDFW PARKE ZNY ZFW - 101-12-27 11.42-41 HPNDFWGA KMFW KMFW KMR4 J30 AN ELD J75 GYE J37 LIM LIM J14 LIM BYP4 KDFW WHTE ZNY ZFW - 101-12-27 11.42-41 HPNDFWGA KMFW KMFW KMMAJ JAN LLD J75 J71 X CH5 J4													
101-12-27 11:42:42 HPNDFW80 KHPN KDFW KHPN ELJOT J80 FYLLS J29 PXV J131 LIT BYP4 KDFW ELJOT ZHV ZFW - 101-12-27 11:42:41 HPNDFW88 KHPN KDFW KHPN BIGOY J75 GVE J37 SPA J14 VUZ J14 LIT BYP4 KDFW BIGOY ZHV ZFW - 101-12-27 11:42:41 HPNDFW88 KHPN KDFW KHPN BIGOY J75 GVE J37 SPA J14 VUZ J14 LIT BYP4 KDFW BIGOY ZHV ZFW - 101-12-27 11:42:41 HPNDFW87 KHPN KDFW KDFW KHPN BIGOY ZHV ZFW - 101-12-27 11:42:41 HPNDFW68 KHPN KDFW KDFW KHPN BIGOY ZHV ZFW - 101-12-27 11:42:41 HPNDFWGA KHPN KDFW KDFW KHPN GREIA V419 JUD0S CAM J31 Z17 J14 LIT BYP4 KDFW WHITE ZHV ZFW - 101-12-27 11:42:41 HPNDFWGA KHPN KDFW KDFW KHPN GREIA V419 JUD0S CAM J31 Z17 Z19													
101-12-22111-42:44 HPNDFWB6 KHPN KDFW KHPN BIGOV 3/75 GVE J37 SPA J14 VUZ J14 LIT BYP4 KDFW BIGOV ZhV ZhW - 101-12-22111-42:41 HPNDFWB7 KHPN KKPW KHPN KBKE J50 CULST STL, R20 FBB BIGP4 KDFW PARKE ZhV - 101-12-22111-42:41 HPNDFWB7 KHPN KDFW KHPN KBKE J50 CULST STL, R20 FBB BIGP4 KDFW PARKE ZhV ZFW - 101-12-22111-42:41 HPNDFWG7 KHPN KBFW KHPE ZhV ZFW - 101-12-22111-42:41 HPNDFWC6 KHPN KBFW KHPE ZhV ZFW - 101-12-2711-42:41 HPNDFWC6 KHPN KBFW KHPE ZhV ZFW - 101-12-2711-42:41 HPNDFWC6 KHPN KBFW KHPN KBFW KBFW KBFW KBFW ZHV ZFW - 101-12-2711-42:41 HPNDFWC6 KHPN KDFW KHPN KBFW KBFW KBFW KHFW ZFW - - 101-12-2711-42:38 HPNDFWC1 KHPN KBFW KHFW		and the second se	and the second second second second	and the second second second				and the second second second					
101-12-27 11:42:41 HPNDFWB7 KHPN KDFW KHPN PARKE J& COLNS J1:34 STL RZC FSM 6YP4 KDFW PARKE ZNY ZFW - 101-12-27 11:42:41 HPNDFWB9 KHPN KDFW KHPN VARTE J209 ORF J1:74 ILM J4 CAE J2X TL J14 LIT (19/4 KDFW WHTE ZNY ZFW - 101-12-27 11:42:41 HPNDFWCA KHPN KDFW KHPN OREX V419 JUDDS CAM J547 SYR J29 PXV J131 LIT BYP4 KDFW GREK0 ZNY ZFW - 101-12-27 11:42:38 HPNDFWCA KHPN KDFW KHPN WHTE J209 ORF J174 CHB J40 MGM J4 JAN LLD TXK BYP4 KDFW GREK0 ZNY ZFW - 101-12-27 11:42:38 HPNDFWCH KHPN KDFW KHPN WHTE J209 ORF J174 CHB J40 MGM J4 JAN LLD TXK BYP4 KDFW WHTE ZNY ZFW - 101-12-27 11:42:38 HPNDFWCH KHPN KDFW KHPN KHE J40 MGM J4 JAN LLD TXK BYP4 KDFW WHTE ZNY ZFW - 101:12-27 11:42:38 HPNDFWCH KHPN KDFW KHE J40 MGM J4 JAN LLD TXK BYP4 KDFW WHTE ZNY ZFW - 101:										ZFW	-		
101-12-27 11.42-41 HPNDFWCA KOHPN KOFW KOHPN GREIA V419-JUDDB CAM J42 T/32 P/XV J131 LTT BYP4 KDFW GREIA ZhV 2 101-12-27 11.42-38 HPNDFWCH KOHPN KOFW KOHPN GREIA ZhV ZhV - 101-12-27 11.42-37 HPNDFWCH KOHPN KOFW KOHPN GREIA ZhV ZHV -	01-12-27 11:43	41 HPNDFV	87 KHPN	KDFW	KHPN PARKE J6 COLNS J134 STL RZC F	SM BYP4 KDFW		PARKE	ZNY				
101-12-27 11:42:38 HPNDFWCH KHPN KDFW KHPN VMHTE J203 ORF J174 CHS J40 MGM J4 JAN ELD TXK BYP4 KDFW WHITE ZNY ZFW - 101-12-27 11:42:37 HPNDFWD5 KHPN KDFW KHPN PARKE J6 BWO SOS AEX LFK CWK LZZ JEN JEN8 KDFW PARKE ZNY ZFW -	001-12-27 11:43	41 HPNDEV	89 KHPN	KDFW	KHPN WHITE J209 ORF J174 ILM J4 CAE	J52 ATL J14 LIT BYP4	KDFW	WHITE	ZNY	ZFW	ŀ		
201-12-27 11:42:37 HPNDFWJ5 KHPN KDFW KHPN PARKE 38 9W0 S0S AEX LFK CWK LZZ JEN JEN8 KDFW PARKE ZNY ZFW -	001-12-27 11:42	41 HPNDEV	CA KHPN	KDFW	KHPN GREKI V419 JUDDS CAM J547 SYR	J29 PXV J131 LIT BY	P4 KDFW	OREKI	ZNY				
201-12-27 11:42:36 HPNDFWJ6 KHPN KDFW KHPN PARKE J6 BWO ARO FSM BYP4 KDFW PARKE ZNY ZFW -							ſ				-		
	001-12-27 11:42	36 HPNDFV	AJ6 KHPN	KDFW	KHPN PARKE J6 BWO ARO FSM BYP4 KD	(FW		PARKE	ZNY	ZFW	·		
	-138 / 138 reco	de										Select All	Deselect /



Ground Stops/Ground Delay Programs

(No	e: This	o page vi	ll refre	sh every minute. Last updated We	3, 14 Jun 2000 20:14:5	57 OMT.)			
	GROUND DELAY PROGRAMS								
	ARPT	START	END	FACILITIES	REASON		MAX AVG	AAR	
<u>.</u>	ATL	1809	2359	ZTL2 - DFW	WX ENROUT	E	74 38	80	
	DFW	1800	0259	ALL	THUNDERSTOP	RMS	150 39	72	
-	ENR	1800	0359	ALL CYYZ/CYUL/CYOW/CYHZ	SUPPORT OF S	SWAP	354 276	5	
-	LGA	2030	0159	NONEST	TSTRMS ENRTE	/SNAP	301 242	-28	ATCSCC Advisory
	PHL	1600	2359	ALL CANADA	LOW CEILIN	our stimuler also size size der der also size d	267 150	30	ATCSCC ADVZY 109 LGA/ZNY 07/14/2004 CDM PROPOSED GROUND DELAY
	STL	1900		ALL	TSTHS		197 113	32	
	010	1500	0135	ALL	Torno		157 115	52	MESSAGE; AIRPORT: LGA
_									ADL TIME: 1637Z Arrivals estimated for: 14/1800Z - 15/0459Z
				GROUND	STOPS			Edit	ARRIVALS ESTIMATED FOR: 14/10002 - 15/04392 ANTICIPATED PROGRAM RATE: 27
50	ARPT		TIME	FACILITIES		REASON		1/17/2004 (Charleston)	FLIGHTS INCLUDED: ALL CONTIGUOUS US DEPARTURES
}	BOS		2030	ZDC/ZTL/ZJX/ZM	/ ZHU	THUNDE	RSTORMS OF	N RTE	SCOPE: (NOWEST+CZY AP) ZAU ZBW ZDC ZFW ZHU ZID ZJX ZKC ZMA
, _	BNI		2100	ZID/ZOB/ZMP/ZAU/ZK	KC/ZNE/ZFW		WX EN RTE		ZNY ZOB ZTL CYHZ CYOW CYUL CYYZ
	CLE 2100		2100	ZNY/ZDC/ZID/ZAU/ZBN/ZOB/ZMP		NEATHER/TSTMS		1S	CANADIAN AIRPORTS INCLUDED: CYHZ CYOW CYUL CYYZ
	CLT	2100		ZDC/ZNY/ZBI	1	1			DELAY ASSIGNMENT TABLE APPLIES TO: ZNY
	CVG		2015	ZID/ZOB/ZNY/ZB	I/ZDC		TSTHS		ANTICIPATED MAXIMUM DELAY: 345
			2100	ZID/ZOB/ZMP/ZAU/ZK	ZHE/ZFW	E/ZFW WX EN			ANTICIPATED AVERAGE DELAY: 202
	DTN 2100		2100	ZDC/ZJX/ZTL/ZHA/ZAU/ZBW/	TSTMS ENROUTE			REASON: WEATHER, THUNDERSTORMS	
	IAD		2000	ZID/ZOB/ZMP/ZAU/ZK	KC/ZHE/ZFW		WX EN RTE		REMARKS: REDUCED AAR TO 27 AND EXTENSION
JFK			2030	ZDC/ZJX/ZHA/ZTL/ZHE/ZH	U/ZFW/ZAB/ZLA T		TSTRM ON RTE		USER UPDATES MUST BE RECEIVED BY: 1700Z
	LGA		2030	ZDC/ZJX/ZHA/ZTL/ZHE/ZH	/ZFW/ZAB/ZLA	TS	TRM ON RT	E	
	HDH		2100	ZAU/ZID/ZHE/ZTL/ZDC/ZJX/	MA/ZOB/ZNY/ZBW		TSTHS		
	ORD		2100	ZAU/ZID/ZOB/ZHA/ZJX/ZTL/ZHE/ZDC/ZNY/ZBW			TSTMS/NO ROUTES		
	STL		2100	ZNY/ZBW/ZOB/ZII	/ZDC	TSTHS			EFFECTIVE TIME: 141643 - 141759
	TEB		2030	ZDC/ZJX/ZHA/ZTL/ZHE/ZH	ZHU/ZFW/ZAB/ZLA THU		UNDERSTORMS ON RTE		SIGNATURE: 04/07/14 16:44
	ZOB		2100	ZTL/ZJX/ZM		NC	ROUTES/W	X	

		DELA	AY INFO	Edit	DEICING	Edit
ARPT	AD	DD	TIME	REASON	ARPT AAR/ADR TIME	PLAN?
ATL		+90	1800	ORD G/S		Contraction of the second
ATL		+60	2001	HX		
BOS		+135	1920	SNAP		
BNI		+15	1703	LDN/AML RSTRN		



Documen

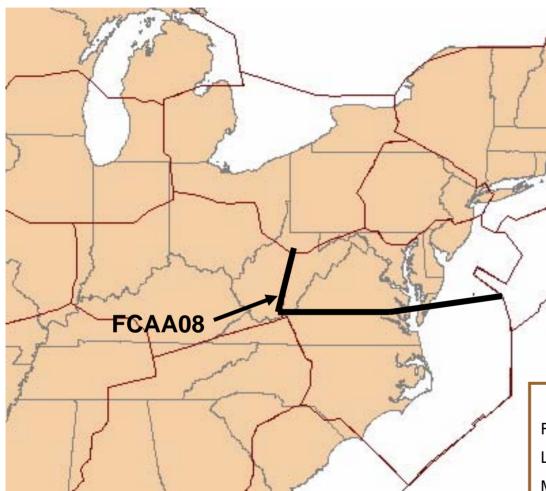


Airspace Flow Program

- 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



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

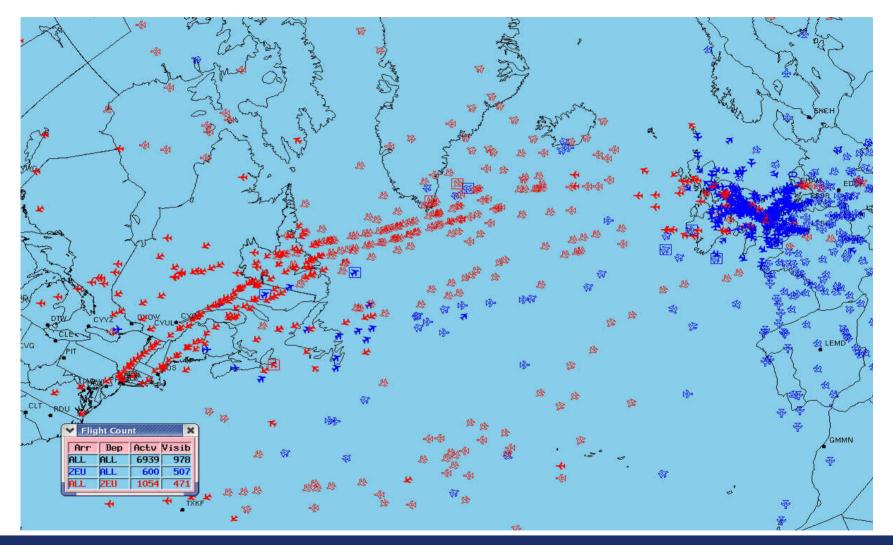
Flow through ZDC:

Low Weather Impact:	135 – 145 Rate/Hour
Med Weather Impact	125 – 135 Rate/Hour
High Weather Impact	115 – 125 Rate/Hour



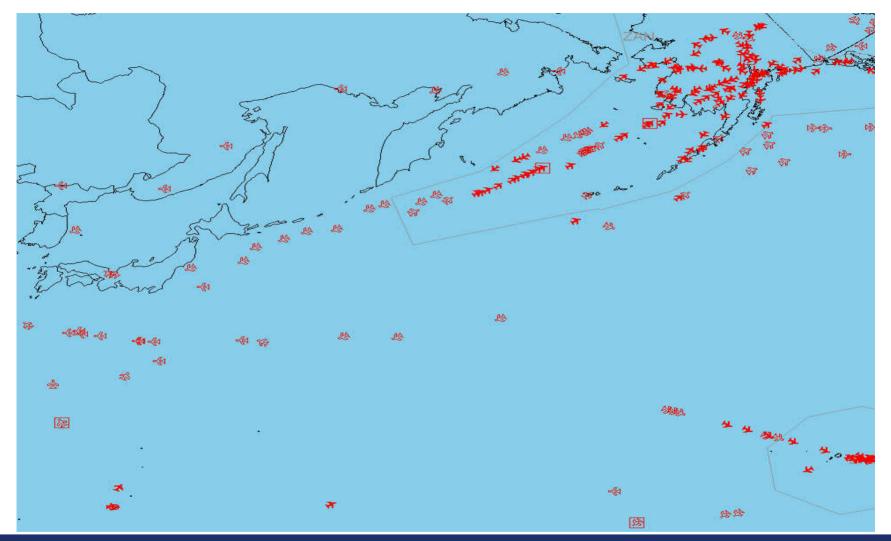
ŀ

European Traffic



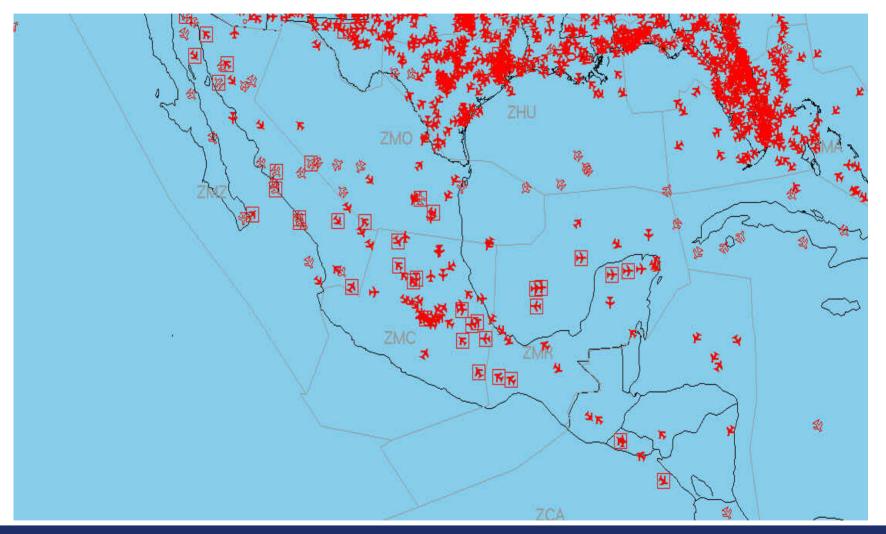


Pacific Traffic



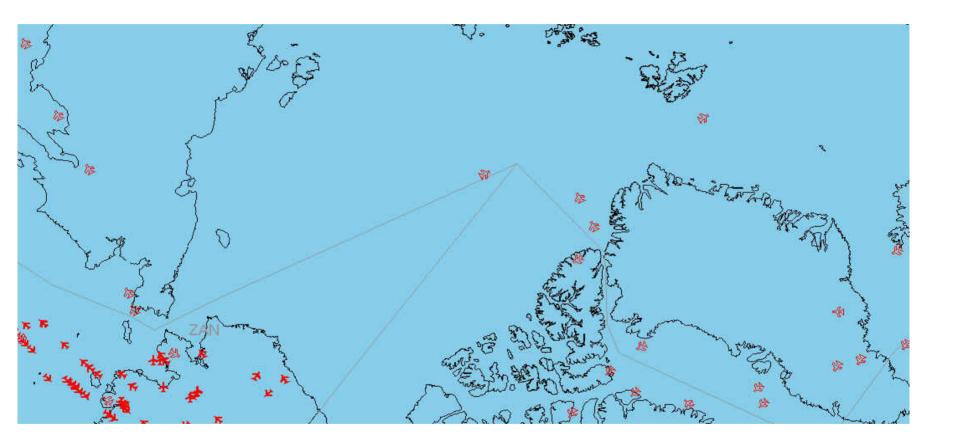


Mexico and Caribbean Traffic





Polar Route





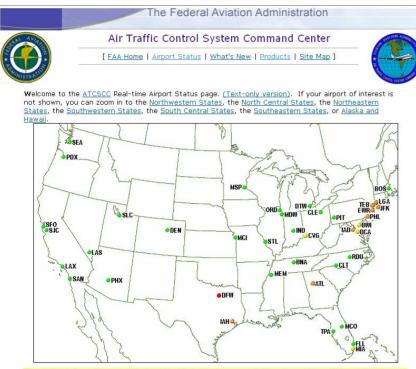
International ETMS Data Exchange

- Current Agreements
 - Mexico
 - Canada
 - United Kingdom
 - COCESNA
 - Chile
 - Columbia

- In Progress
 - Eurocontrol
 - Panama
 - Dominican Republic
- Future Expansion
 - Brazil
 - Japan



ATCSCC Web Site



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

Leg	iend
• General Arrival/Departure delays are 15 minutes or I	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]

Please <u>contact our Webmaster</u> with questions or comments.
[Web Site Policy & Issues]

Internet

http://www.fly.faa.gov

