

## **CDM Automation Team**

- Tasking #47: Delay Assignments
   Time Based Flow Metering (TBFM)
   Scheduled Departure Times
- Tasking #55: Data Quality Report Card/Surface
   Data Element Integration



## Task #47 Recommendations to CSG

- AFP in DAS mode vs. UDP
- GDP algorithm change when GDPs are issued after an AFP or CTOP
- Use of arrival slots that are assigned to flights arriving earlier than GDP/AFP start time



## Flights Arriving Earlier Than GDP/AFP

- Non-Airborne flights with IGTA in program time frame but are arriving earlier than GDP/AFP start time are delayed into the program
- Occurs more often for operators that are not bound by schedule



## Use of Arrival Slots ECR Enhancements

- Capability to remove delay for flights arriving prior to GDP/AFP start time which will create "open" slot with options:
  - Leave available for pop-up
  - Compress to end of program
  - Assigned to specific flight
  - Deleted



#### Use of Arrival Slots-ECR Enhancements

- Provide ATCSCC capability to manage "open" slots in UDP
  - Create, delete or compress "open" slots
  - Ability to assign an "open" slot to a specific flight
- Provide ATCSCC FSA flight history



## Recommendations to CSG cont.

- Computation of Estimated Time of Departure (ETD)
  - TBFM Scheduled Departure Times
  - P-Time vs. L-Time when L-Times are in the past



## Time Based Flow Metering

- Capability to display TBFM scheduled departure times in TFMS and FSM was deployed with Release 10 (Nov. 14)
- TBFM scheduled departure times are expected to populate TFSM/FSM Spring 2015

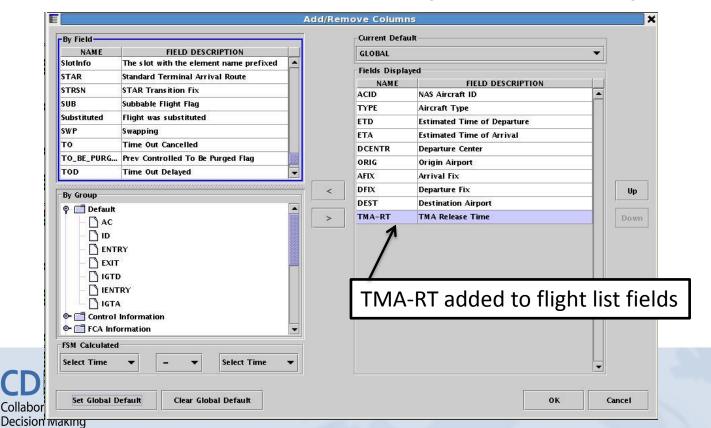


## Time Based Flow Metering cont.

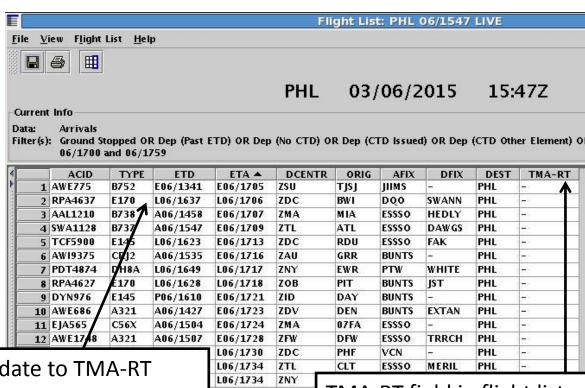
- Once TBFM scheduled departure times being populating TFMS/FSM, they can be viewed in FSM/ESM version 11 by selecting field "TMA-RT" (TMA Release Time)
- Flights with TMA-RT should have ETD updated to the TMA-RT, the ETD will be prefixed with "M"



## TMA Release Time (TMA-RT) Field



## TMA-RT Field cont.



ETD should update to TMA-RT time, pre-fixed with "M"

**Decision Making** 

L06/1735 ZID L06/1736 ZAU

TMA-RT field in flight list will contain the scheduled TBFM departure time.

## 50% Sub Error in AFP

- Error was occurring due to TFMS was not correctly recalculating ENTRY (estimated entry time) into an AFP for flights that had ABRG (adaptive bridge) control type when ABRG was due to a "drop-out"
- Error in TFMS was corrected on March 6



## Tasking #55

- CAT is working with SCT on Tasking #55: Data Quality Report Card/Surface Data Element Integration
- Kick-Off meeting January 16
- Meeting in MCO during CDM Spring Session



## **CAT Members**

charlie.mead@aa.com

Jill Sparrow Charlie Mead Mike McAfee Jim McClay Tim Matuszewski

Mike Namendorf Brett Gilbertson **RB** Haggerty Scott Fritz

Lenard Carter Gino Siller

ATCSCC CDM Office jill.sparrow@faa.gov AAL

**FDX NBAA** 

UAL JBU DAL

A4A USA

ATCSCC NTMS/NATCA ATCSCC NTMS/NATCA



# EXTRA Slides IGTA/IENTRY in GDP/AFP vs. ETA/IENTRY Earlier than GDP/AFP



## Initial Gate and Initial Entry

- For all flights, "Initial" times are created and then frozen in the data
  - Initial Gate Time of Departure (IGTD)
  - Initial Gate Time of Arrival (IGTA)
  - Initial Entry Time (IENTRY)
- Frozen IGTA and IENTRY times are key in the Ration-by-Schedule algorithms for GDP and AFP

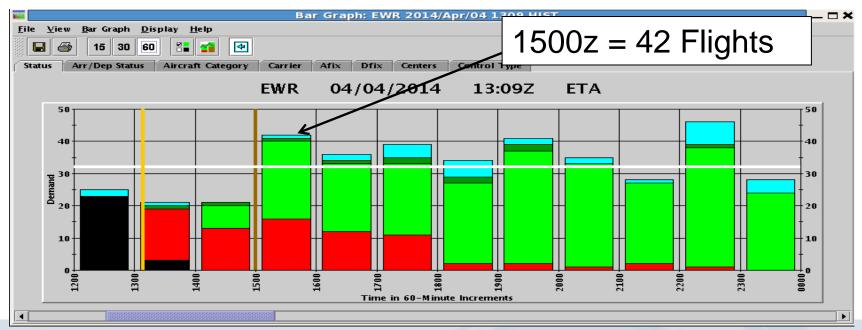


## Flights With IGTA/IENTRY in GDP/AFP

- VS. ETA/ENTRY
  Non-airborne Flights with Initial Gate Time of Arrival (IGTA) within the GDP start/end times but have Estimated Time of Arrival (ETA) before GDP will be given an arrival slot in the GDP
- Behavior same for Non-airborne flights with Initial Entry Time (IENTRY) within AFP start/end times but have Estimated Entry Time (ENTRY) earlier than AFP

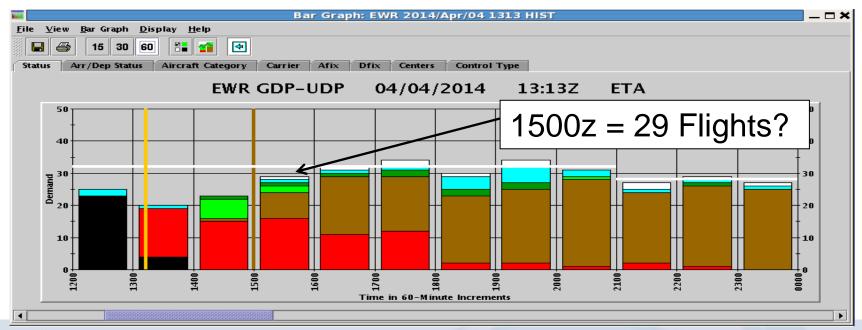


## EWR 4/4/2014



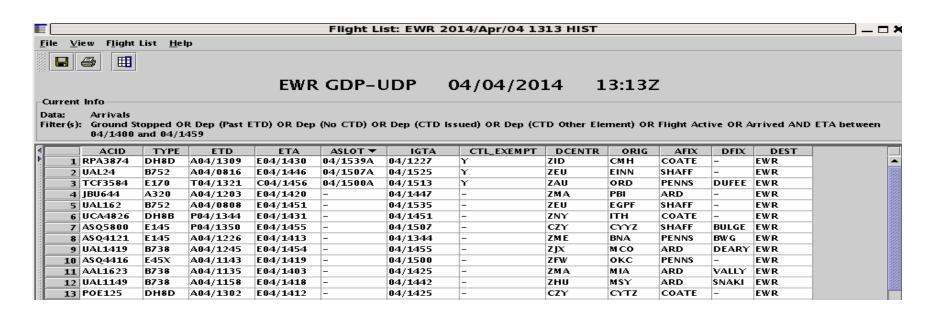


## EWR 4/4/2014 cont.





## ETA Earlier Than GDP





## N723JA in AFPJX7 8/3/14

LGTD	LGTA	IGTD	IGTA	PGTD	PGTA	PETE	SGTD	SGTA	ADL_TIME	ARTD	ARTA	BETD	BETA	OETD	OETA	OCTD	OCTA
03/1500	03/1704	03/1500	03/1704						02/2002			03/1514	03/1719	03/1514	03/1719		
03/1300	03/1505	03/1500	03/1704						02/2202			03/1314	03/1519	03/1314	03/1519		
03/1300	03/1505	03/1500	03/1704						03/0002			03/1314	03/1519	03/1314	03/1519		
		03/1500							03/0802					03/1314			
	-	-	-	03/1300		124			03/1102				-	03/1312	_		
				03/1300		124			03/1202								03/1730
				03/1300		124			03/1232								03/1730
					03/1514	124			03/1437							03/1602	
				03/1300					03/1527	03/1523						03/1530	
				03/1300					03/1532	03/1523						03/1530	
				03/1300					03/1537	03/1523						03/1530	
				03/1300						03/1523						03/1530	
03/1300	03/1504	03/1500	03/1704	03/1300	03/1514				03/1607	03/1523		03/1312	03/1511	03/1312	03/1511	03/1530	03/1658
				03/1300					03/1627	03/1523							03/1658
				03/1300						03/1523		03/1312					
03/1300	03/1504	03/1500	03/1704	03/1300	03/1514				03/1652	03/1523						03/1530	
				03/1300					03/1657	03/1523						03/1530	
				03/1300					03/1707	03/1523						03/1530	
				03/1300						03/1523						03/1530	
03/1300	03/1504	03/1500	03/1704	03/1300	03/1514				03/1722	03/1523		03/1312	03/1511	03/1312	03/1511	03/1530	03/1658
03/1300	03/1504	03/1500	03/1704	03/1300	03/1514				03/1727	03/1523		03/1312	03/1511	03/1312	03/1511	03/1530	03/1658
03/1300	03/1504	03/1500	03/1704	03/1300	03/1514				03/1732	03/1523	03/1730	03/1312	03/1511	03/1312	03/1511	03/1530	03/1658



## N723JA ENTRY

Flight History: FCAJX7

Data Anomalies Detected: None Flight in Other Elements: Arr/Dep

Color Key: CTD/CTA changed due to an FSM Event, DAS Delay, or GAAP Delay Airline update to CTD/CT/

ETMS DataGate Flight History

ADL_TIME	ACID	ETD	ENTRY	EXIT	ETA	ETE	CTD	CTA	CTE	ASLOT	CTL_TYPE
03/1136	N723JA	L03/1312	03/1440	03/1440	E03/1511	119				-	
03/1201	N723JA	L03/1602	03/1730	03/1730	C03/1801	119	03/1602	03/1730	88	03/1730A	AFP
03/1233	N723JA	L03/1602	03/1730	03/1730	C03/1802	120	03/1602	03/1730	88	03/1730A	AFP
03/1438	N723JA	L03/1530	03/1658	03/1658	C03/1730	120	03/1530	03/1658	88	03/1658P	UPD
03/1523	N723JA	L03/1530	03/1658	03/1658	C03/1730	120	03/1530	03/1658	88	03/1709A	AFP
03/1528	N723JA	A03/1523	03/1652	03/1652	E03/1723	120	03/1530	03/1658	88	03/1709A	AFP
03/1533	N723JA	A03/1523	03/1654	03/1654	E03/1726	123	03/1530	03/1658	88	03/1709A	AFP
03/1538	N723JA	A03/1523	03/1653	03/1653	E03/1724	121	03/1530	03/1658	88	03/1709A	AFP

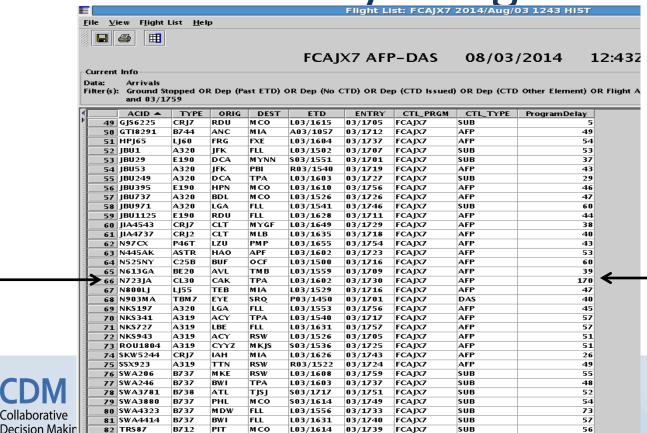


## N723JA IENTRY

LGTD	LGTA	IGTD	IENTRY	IGTA	PGTD	PGTA	PETE	SGTD	SGTA	ADL_TIME	ARTD
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514	124			03/1136	
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514	124			03/1201	
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514	124			03/1233	
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514	124			03/1438	
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514	124			03/1523	
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514				03/1528	03/1523
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514				03/1533	03/1523
03/1300	03/1504	03/1500	03/1638	03/1704	03/1300	03/1514				03/1538	03/1523



## N723JA Delay Assignment



03/1750

FCA1X7

SUB

9 0

Collaborative

83 UAL206

A320

ORD

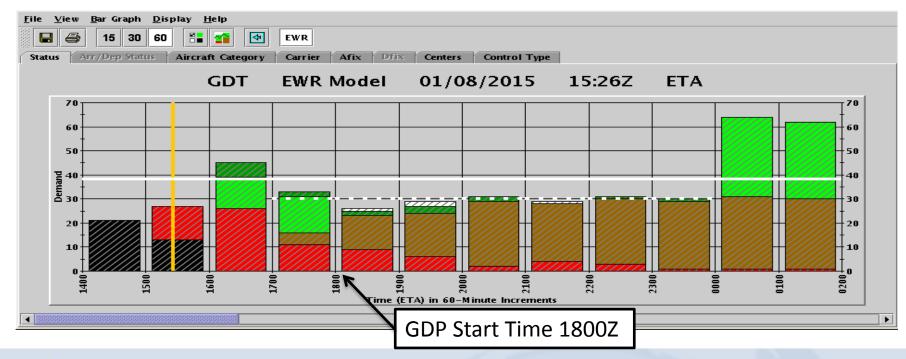
M CO

R03/1606

## N198HB Delay Assignment AFPJX7

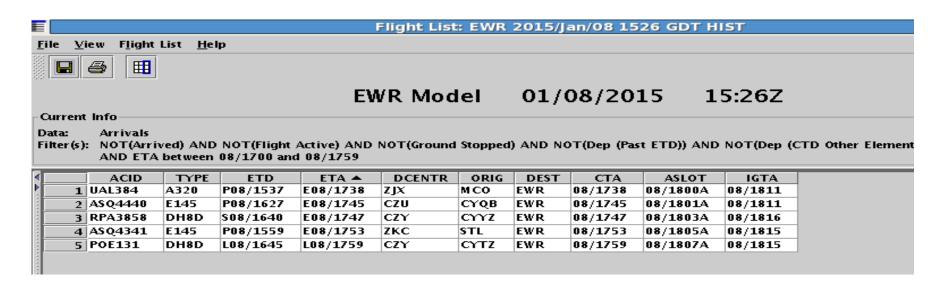
	t Info Arrivals					TT-DA	S U87	′03/201 <sub>′</sub>	4 12:432
	Arrivals								
	. around st	opped Ol	R Dep (Pa	st ETD)	OR Dep (No	CTD) OR De	p (CTD Issued	OR Dep (CTD	Other Element) OR
	between 0	3/1600 a	ınd 03/1	659					
	ACID 🔺	TYPE	ORIG	DEST	ETD	ENTRY	CTL_PRGM	CTL_TYPE	Program Delay
40	EJA801	C560	0A9	TMB	L03/1556	03/1645	FCAIX7	AFP	50
	EJM96	LJ60	IND	APF	L03/1502	03/1625	FCAJX7	AFP	54
	FIV622	C680	AVL	BCT	L03/1522	03/1607	FCAJX7	AFP	42
	FWK945	CL30	PDK	TPA	L03/1522	03/1609	FCAJX7	AFP	54
	JBU251	A320	BOS	MCO	L03/1353	03/1614	FCAJX7	SUB	22
	JBU465	A320	BOS	RSW	L03/1333	03/1616	FCAJX7	SUB	41
	JBU569	A320	BOS	FLL	L03/1324	03/1605	FCAJX7	SUB	39
	JBU765	A320	IFK	MWCR	L03/1459	03/1631	FCAJX7	AFP	35
	JBU925	A320	JFK	TPA	L03/1446	03/1651	FCAJX7	SUB	27
	JBU1051	A320	JFK	MMUN	L03/1442	03/1637	FCAJX7	SUB	11
	JBU1169	E190	RIC	M CO	L03/1451	03/1602	FCAJX7	SUB	41
	JBU1223	A320	DCA	M CO	L03/1525	03/1648	FCAJX7	AFP	38
	JBU1447	E190	HPN	TPA	L03/1344	03/1600	FCAJX7	SUB	53
62	JBU1567	E190	HPN	PBI	L03/1514	03/1656	FCAJX7	SUB	35
	JBU1691	A320	JFK	MRLB	L03/1446	03/1616	FCAJX7	AFP	33
	LXJ525	CL30	FOK	PBI	P03/1351	03/1611	FCAJX7	AFP	41
65	N198HB	LJ60	CAK	TPA	P03/1521	03/1651	FCAJX7	DAS	39
66	N303WS	CL30	FRG	PBI	L03/1525	03/1658	FCAJX7	AFP	45
67	N545CG	LJ45	ASG	MYNN	L03/1458	03/1624	FCAJX7	AFP	47
68	N560ML	C56X	ASW	MKY	P03/1519	03/1653	FCAJX7	DAS	39
69	N662BM	C510	ADS	FXE	P03/1453	03/1655	FCAJX7	DAS	40
70	N697FF	C56X	HRJ	MYAT	L03/1559	03/1640	FCAJX7	AFP	49
71	N771FF	AC90	LOM	APF	L03/1320	03/1605	FCAJX7	UPD	11
72	N804SH	PC12	M QS	PBI	P03/1353	03/1640	FCAJX7	DAS	43
73	NKS877	A319	ATL	FLL	L03/1611	03/1641	FCAJX7	AFP	43
74	OPT410	BE40	CLT	ORL	P03/1525	03/1609	FCAJX7	AFP	45
75	ROU1834	B763	CYUL	MTPP	P03/1414	03/1632	FCAJX7	AFP	50
	RPA3234	E170	DCA	RSW	L03/1500	03/1638	FCAJX7	SUB	22
	RPA3436	E170	DCA	FLL	L03/1515	03/1645	FCAJX7	AFP	40
	SKW307V	CRJ7	ORD	MYNN	L03/1427	03/1612	FCAJX7	AFP	24
	SKW5494	CRJ7	ORD	MYNN	\$03/1442	03/1628	FCAJX7	SUB	47
	SWA126	B737	внм	M CO	L03/1614	03/1654	FCAJX7	SUB	47
01	SWA255	B737	ATL	M CO	L03/1626	03/1655	FCA IX7	SUB	47

## EWR GDP Model 1/8/2015





## EWR Model 1/8/2015



Five flights with ETA earlier than GDP hold slots in GDP



## Extra Slides P-Time in Future/L-time in Past



## Example DAL1902 LGA-PBI

- DAL1902 LRTD = 1829z
- At 1844z, DAL1902 GS until 2005z
- GS purged at 2005z (GDP not issued)
- FAA updated P-time to 2030z, LRTD = 1829z
- TFMS uses L-time over P-time, DAL1902 with LRTD of 1829z Time Out canceled at 1959z



## Title

Text

