

ATD-2 Integrated Arrival/ Departure/Surface (IADS) System Specification - Metroplex & TOS Concepts

(Phase 3)
Version 2

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Purpose

This document contains the system specifications and requirements verification matrix for the Metroplex & TOS concepts developed during ATD-2 Phase 3. This document was updated in September 2021 for the final Phase 3 tech transfer delivery.

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1 User Interface

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)												
1. User Interface	IADS includes a user interface.	iads-client																
1.1. User Interface - General	STBO includes all user-required functionality.	iads-client		ATDI-6697 - ATD-2 Client User Interface Evolution for 6.x CLOSED ATDI-4263 - ATD-2 Client User Interface Evolution for 5.x OPEN ATDI-3915 - ATD-2 Client User Interface Evolution for 4.x OPEN														
1.1.1.	STBO includes profiles that can be saved and loaded.	iads-client	5.x	<table border="0"> <tr> <td>Key</td> <td>Summary</td> </tr> <tr> <td>ATDI-4841</td> <td>Update MP SCF files with latest capabilities</td> </tr> <tr> <td>ATDI-5290</td> <td>Import default scf files for DAL and DFW</td> </tr> <tr> <td>ATDI-5288</td> <td>Import user preference files to release 5.0.0</td> </tr> <tr> <td>ATDI-5541</td> <td>Import user preference files to release 5.2.0</td> </tr> <tr> <td>ATDI-5723</td> <td>Import user preference files to release 5.4.0 for DFW</td> </tr> </table> Showing 5 out of 22 issues	Key	Summary	ATDI-4841	Update MP SCF files with latest capabilities	ATDI-5290	Import default scf files for DAL and DFW	ATDI-5288	Import user preference files to release 5.0.0	ATDI-5541	Import user preference files to release 5.2.0	ATDI-5723	Import user preference files to release 5.4.0 for DFW	D	ATD2-P3-FE-4 ATD2-P3-FE-5-1 ATD2-P3-FE-5-2 ATD2-P3-FE-6 ATD2-P3-FE-7 ATD2-P3-FE-8
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ATDI-5541	Import user preference files to release 5.2.0																	
ATDI-5723	Import user preference files to release 5.4.0 for DFW																	
1.1.2.	STBO displays departure fixes in specified colors.	iads-client: map	5.0	ATDI-4538 - IDS5 Metroplex TMI client Departure Fix Display CLOSED	D	ATD2-P3-FE-11-0												

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				ATDI-4544 - IDS5 Metroplex TMI client should react to TMI changes CLOSED		
1.1.3.	STBO allows for the option to display departure fixes name in: <ol style="list-style-type: none"> Abbreviated form Full form 	iads-client: map	5.0, 5.2.2	ATDI-5289 - IDS5 Fix display: change 3-char fix abbrev to 5-char fix name CLOSED ATDI-5575 - Replace ARD with RDA for abbreviation of ARDIA route/fix CLOSED	D, I	ATD2-P3-FE-11-0
1.1.4.	STBO displays departure fix as departure procedure.	iads-client: map, timeline	5.2	ATDI-4700 - For DFW display departure fixes as departure procedures CLOSED ATDI-5758 - Upgrade TOS RAM to respond to fix/procedure name toggle CLOSED	D	ATD2-P3-FE-11-0
1.1.5.	STBO displays departure demand for: <ol style="list-style-type: none"> Departure fixes Departure gates 	iads-client: graph	5.0	ATDI-4548 - Create departure demand graph CLOSED ATDI-4961 - Add tool tips to demand and delay graphs CLOSED	D, I	ATD2-P3-FE-11-0 ATD2-P3-FE-13-0

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-5214 - Demand graphs: rename 'Scheduled' to 'Terminal Constrained' CLOSED		
1.1.6.	STBO displays departure delay for: <ol style="list-style-type: none"> 1. Departure fixes 2. Departure gates 	iads-client: graph	5.0	ATDI-4549 - Create departure delay graph on IDS5 CLOSED ATDI-4961 - Add tool tips to demand and delay graphs CLOSED	D	ATD2-P3-FE-11-0 ATD2-P3-FE-13-2
1.1.7.	STBO displays flights' delay: <ol style="list-style-type: none"> 1. Terminal delay 2. Surface delay 3. Total delay 	iads-client: timeline	5.0	ATDI-4561 - Add delay to TOS timeline CLOSED	D	ATD2-P3-FE-11-0
1.1.8.	STBO displays flights.	iads-client: map	5.0	ATDI-4680 - Client: Add map toolbar option to hide arrival icons CLOSED	D	ATD2-P3-FF-10 ATD2-P3-FE-11-1
1.1.9.	STBO displays flights ordered by: <ol style="list-style-type: none"> 1. Terminal Constrained Takeoff Time (TCOT) 2. Surface Constrained Takeoff Time (TTOT/Latest) 	iads-client: timeline	5.0	ATDI-4805 - Display Terminal Controlled Off Time (TCOT) on STBO timelines CLOSED ATDI-5196 - Change data label names in the timeline settings CLOSED	D, I, T	ATD2-P3-FE-11-0
1.1.10.	STBO displays surface maps of airports within D10 <ul style="list-style-type: none"> • DFW, DAL, DTO, FTW, FWS, GKY, GPM, NFW, RBD, TKI, ADS, AFW 	iads-client: map	5.1 5.2 5.3	ATDI-5342 - Add DAL surface layout to map CLOSED	D, I	ATD2-P3-FE-11-1 ATD2-P3-BF-3

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-5628 - Update all DFW installs to be configured for small airports CLOSED ATDI-5407 - Add a 'Preview' button to the Airport Settings dialog CLOSED		
1.1.11.	STBO displays flights, filtered by airport. <ul style="list-style-type: none"> DFW, DAL, DTO, FTW, FWS, GKY, GPM, NFW, RBD, TKI, ADS, AFW 	iads-client: map	5.1 5.3	ATDI-5356 - Map - modification of View menu to distinguish arr/dep per airport CLOSED	D, I	ATD2-P3-BF-3
1.1.12.	STBO displays range rings for airports within the metroplex.	iads-client: map	5.2 5.3	ATDI-5354 - Add airport tabs in range rings set-up window CLOSED	D, I	ATD2-P3-FE-11-1
1.1.13.	STBO displays arrival and departure flights for each airport within the metroplex with separate and configurable color schemes	iads-client: map, timeline	5.1 5.2.1 5.4	ATDI-5374 - Update color scheme for arrivals and departures in datatag setting CLOSED ATDI-5572 - Update arrival runway color for DFW 17C/35C CLOSED ATDI-5767 - Client: Add colors for satellite arrivals when using the Arrival Runway color scheme CLOSED	D, I	ATD2-P3-FE-11-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-5675 - Change color for DFW/DAL departures to D10 airport on the timeline CLOSED</p> <p>ATDI-5721 - Match fix/route color to own gate color on the timeline while using the departure gate color scheme CLOSED</p>		
1.1.14.	STBO displays the destination of arrival flights.	iads-client: map, timeline	5.4.1	<p>ATDI-5828 - Add destinations to the list of data in the Timeline and Map setting for arrivals CLOSED</p>	D	ATD2-P3-FF-10
1.1.15.	STBO displays flights that require reporting in OPSNET. STBO allows users to designate OPSNET flights.	iads-client: flights table, timeline	5.5	<p>ATDI-5842 - Add OPSNET Timeline Option for DFW and DAL Towers CLOSED</p>	D	ATD2-P3-BF-3
1.1.16.	STBO displays flights' full routes on the map.	iads-client: map	5.10	<p>ATDI-6231 - expand alt+r display of route to include full route CLOSED</p>	D	ATD2-P3-FE-12-1
1.1.17.	STBO allows for the option to display for departure flights: <ol style="list-style-type: none"> 1. Terminal delay 2. Surface delay 3. Total delay 4. Origin 5. Alternate Departure Fix 6. Time in Queue 	iads-client: Timeline	5.0 5.2 5.7 5.11.3 6.0	<p>ATDI-4561 - Add delay to TOS timeline CLOSED</p> <p>ATDI-5497 - Add origin as display element for the timeline CLOSED</p> <p>ATDI-6041 - Timeline datatag: indicate both the 'filed fix' and the 'TOS</p>	D, I	ATD2-P3-FE-11-0

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				route fix' after ATC approval until the flight plan is effectively amended CLOSED ATDI-6650 - Add "Time in Queue" data element to the timeline CLOSED ATDI-6934 - Prevent TQ (Time in Queue) from populating at DAL CLOSED		
1.1.18.	STBO displays flight data elements: <ul style="list-style-type: none"> Predicted Off Block Time (POBT) 	iads-client: flights table, TOS Table	6.0	ATDI-6884 - Add POBT to the Client Flights and TOS Tables CLOSED	D, I	
1.1.19.	STBO 'Taxi List' displays arrival and departure traffic for each runway.	iads-client	5.1 5.11.2	ATDI-5276 - Add remaining features from STBO that are not included in the MP CLOSED ATDI-6645 - Taxi List: Capability to Reorder Runways CLOSED	D	
1.1.20.	STBO displays individual flights' properties.	iads-client: flight properties window	5.11.3	ATDI-6819 - MP Flight Properties Window: Modify Sequence of OUT and OFF Data Elements CLOSED ATDI-6757 - MP Flight Properties Window: Change Data Element for Predicted OFF Time CLOSED	D	


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1.2. User Interface - Metroplex	STBO includes metroplex functionality.	iads-client	5.x	ATDI-4480 - ATD-2 TOS Metroplex TMI Client OPEN ATDI-4012 - ATD-2 DFW RTC and STBO Client User Interface Development OPEN ATDI-2738 - ATD-2 DFW Metroplex Development OPEN		
1.2.1.	STBO includes clients for the following roles: <ul style="list-style-type: none"> Metroplex Planner (ATC users) <ul style="list-style-type: none"> DFW Tower DAL Tower D10 Tracon ZFW ARTCC Metroplex Planner Flight Operator (Airline Operators) <ul style="list-style-type: none"> AAL SWA ENY Observer 	iads-client	5.x 6.0	ATDI-4679 - Client: Set up Flight Operator and Metroplex Planner roles CLOSED ATDI-5285 - Setup observer mode scripts for the DFW/DAL only clients CLOSED ATDI-5272 - Setup standard STBO run scripts CLOSED ATDI-4902 - rungui.MetroplexPlanner for DAL CLOSED ATDI-6878 - Create ZFW user for Client CLOSED ATDI-4184 - Metroplex commander configuration for DFW and DAL CLOSED	D	ATD2-P3-FE-3 ATD2-P3-FE-4 ATD2-P3-FE-5-1 ATD2-P3-FE-5-2 ATD2-P3-FE-6 ATD2-P3-FE-7 ATD2-P3-FE-8 ATD2-P3-FF-1 ATD2-P3-FF-3 ATD2-P3-FF-4 ATD2-P3-FF-6 ATD2-P3-FF-11 ATD2-P3-FF-12

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1.2.2.	Metroplex Planner clients include STBO functionality.	iads-client	5.1	<p>ATDI-5275 - Add remaining right-click menu features in STBO to MP CLOSED</p> <p>ATDI-5276 - Add remaining features from STBO that are not included in the MP CLOSED</p> <p>ATDI-5341 - TaxiList for DAL users CLOSED</p>	D, I	ATD2-P3-FF-11
1.2.3.	Flight Operator clients display TOS data for their carrier and sub-carriers.	iads-client: TOS Table	5.0	<p>ATDI-4714 - Flight Operators should only be allowed to see their own flights CLOSED</p> <p>ATDI-4976 - Flight Operator limitation to see their own flights only applies to TOS CLOSED</p>	D, I	ATD2-P3-FE-4 ATD2-P3-FE-5-1 ATD2-P3-FF-3
1.2.4.	STBO displays all airports within the D10 TRACON.	iads-client: map	5.2	<p>ATDI-4852 - Update small airports displayed in the Client CLOSED</p> <p>ATDI-4579 - Update client to support multiple airports CLOSED</p> <p>ATDI-5628 - Update all DFW installs to be configured for small airports CLOSED</p>	D	ATD2-P3-FE-11-1 ATD2-P3-FE-12-0

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				ATDI-5342 - Add DAL surface layout to map CLOSED		
1.3. User Interface - TOS	STBO includes Trajectory Option Set (TOS) functionality.	iads-client iads-tos	5.x	ATDI-4534 - ATD-2 TOS STBO Integration OPEN		
1.3.1.	STBO configures TOS operations: <ul style="list-style-type: none"> Active Inactive 	iads-client	5.0	ATDI-4715 - Add ability to turn TOS active/inactive in TM Actions CLOSED	D, T	ATD2-P3-FE-1 ATD2-P3-FF-1 ATD2-P3-FF-2 ATD2-P3-BF-0
1.3.2.	STBO indicates when TOS operations are active or inactive.	iads-client: Toolbar, Notification Panel	5.0 5.10	ATDI-4560 - Add TOS indicator to GUI toolbars CLOSED ATDI-4577 - Add TOS notifications to the notification table CLOSED ATDI-6047 - Notifications Generated by TOS Operation Tab Changes CLOSED	D, T	ATD2-P3-FE-1 ATD2-P3-FF-2
1.3.3.	STBO displays TOS information in a table: <ol style="list-style-type: none"> CDR Route RTC RMNT Time to Expiration Add nm RWY Eligibility State Coord State Departure Fix times <ol style="list-style-type: none"> UDFT, TDFT, EDFT/TCFT 	iads-client: TOS Table iads-tos iads-tos- delay-savings	5.0 5.1 5.6 5.10 5.11 5.11.3 6.0	ATDI-4480 - ATD-2 TOS Metroplex TMI Client OPEN ATDI-4479 - ATD-2 TOS Data Table OPEN ATDI-4566 - Setup TOS table fields CLOSED	D, I, T	ATD2-P3-FE-11-0

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
	<ul style="list-style-type: none"> 10. Runway times <ul style="list-style-type: none"> a. UTOT, TTOT, ETOT/TCOT 11. Top CDR <ul style="list-style-type: none"> a. Top Dep Gate, Top Total Delay Savings OFF, Top Rwy, Top ETOT, Top add nm, Top CDR Rte, Top Departure Fix, Top Departure Fix Delay, Top Departure Fix Time, Top EDFT, Top RTC, Top RMNT, Top TTOT, Top Term Delay OFF, Top Term Delay Savings Dep Fix, Top Term Delay Savings OFF, Top Total Delay OFF, Top UTOT 12. Delay <ul style="list-style-type: none"> a. Surface delay, Terminal delay, Total delay at OFF b. Terminal delay, Total delay at Fix c. Surface, Terminal, and Total Delay savings at OFF d. Terminal and Total delay saving at Fix 13. TOS Real-time Metrics <ul style="list-style-type: none"> a. Delay Savings b. Probability Delay Savings > RTC c. Probability Delay Savings > 0 14. IN Delay <ul style="list-style-type: none"> a. IN Delay b. IN Delay Savings 			<p>ATDI-5114 - Update TOS Table Fields - Part 1 - Add new backend items CLOSED</p> <p>ATDI-5115 - Update TOS Table Fields - Part 2 - Change Display of TOS Items CLOSED</p> <p>ATDI-5166 - Add Save-for-Quick-Create capability for TOS tables CLOSED</p> <p>ATDI-6788 - Modify Names of Existing TOS Data Elements CLOSED</p> <p>ATDI-6685 - Add probability delay savings to tos-delay-savings-ovc CLOSED</p> <p>ATDI-6686 - Add probability delay savings greater than zero field to TOS table CLOSED</p> <p>ATDI-6129 - Real-time metrics for TOS Tables CLOSED</p> <p>ATDI-6687 - Add IN delay savings to TOS table CLOSED</p>		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-6688 - Added Predicted IN delay to TOS table CLOSED</p> <p>ATDI-6689 - Add sum of predicted IN delay and IN delay savings to TOS table CLOSED</p> <p>ATDI-6882 - Update RMNT to Time To Expiration in the Client CLOSED</p>		
1.3.4.	STBO displays Estimated Take Off Time (ETOT): <ol style="list-style-type: none"> If Terminal Metering is on ETOT = TCOT If Terminal Metering is off ETOT = TTOT 	iads-client: TOS Table	5.0	<p>ATDI-5114 - Update TOS Table Fields - Part 1 - Add new backend items CLOSED</p> <p>ATDI-5115 - Update TOS Table Fields - Part 2 - Change Display of TOS Items CLOSED</p>	D, I	ATD2-P3-TS-5 ATD2-P3-TS-3 ATD2-P3-FE-11-0
1.3.5.	STBO displays Estimated Departure Fix Time (EDFT).	iads-client: TOS Table	5.0	<p>ATDI-5114 - Update TOS Table Fields - Part 1 - Add new backend items CLOSED</p> <p>ATDI-5115 - Update TOS Table Fields - Part 2 - Change Display of TOS Items CLOSED</p>	D, I	ATD2-P3-FE-11-0
1.3.6.	STBO displays aircrafts with CPDLC-DCL capability.	iads-client: TOS Table	5.2	<p>ATDI-5489 - Add CPDLC-DCL data element to TOS Departure Table CLOSED</p>	D, I, T	ATD2-P3-FE-11-1 ATD2-P3-BF-3

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-5325 - Incorporate SFDPS data into the Fuser CLOSED</p> <p>ATDI-4990 - Add CPDLC-DCL data element to the TOS Data CLOSED</p>		
1.3.7.	STBO filters TOS information:	iads-client: TOS Table, Timeline	5.0 5.2 5.8 5.11	<p> ATDI-4480 - ATD-2 TOS Metroplex TMI Client OPEN</p> <p>ATDI-4563 - TOS table filtering CLOSED</p> <p>ATDI-4713 - Update TOS table filters and default fields per latest requirements CLOSED</p> <p>ATDI-5454 - Add 'coord state' and 'eligibility state' as filter criteria for the timeline CLOSED</p>	D, I, T	ATD2-P3-FF-9-1
1.3.8.	STBO specifies information in the TOS Table: <ul style="list-style-type: none"> • Search • Sort • Highlight 	iads-client: TOS Table	5.0	<p>ATDI-4564 - TOS table searching CLOSED</p> <p>ATDI-4717 - TOS table sorting CLOSED</p>	D	ATD2-P3-FF-8 ATD2-P3-FF-7 ATD2-P3-FF-9-2

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				<p>ATDI-4565 - TOS table color code eligibility and coordination state CLOSED</p> <p>ATDI-4578 - Add TOS alerting to flight and TOS tables CLOSED</p>		
1.3.9.	STBO displays all TOS routes for an individual TOS flight in a menu.	iads-client: TOS Flight Menu	5.0 5.11.3	<p>ATDI-4562 - Create a TOS flight data table CLOSED</p> <p>ATDI-4566 - Setup TOS table fields CLOSED</p> <p>ATDI-5114 - Update TOS Table Fields - Part 1 - Add new backend items CLOSED</p> <p>ATDI-5115 - Update TOS Table Fields - Part 2 - Change Display of TOS Items CLOSED</p> <p>ATDI-6656 - TOS Flight Menu: Highlight 'Top' TOS Route CLOSED</p> <p>ATDI-6655 - Bring any TOS Flight Menus to the front of the TOS Departure Table CLOSED</p>	D, I	ATD2-P3-FE-11-0


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1.3.10.	Flight Operator clients submit TOS routes.	iads-tos iads-client	5.0	<p>ATDI-4716 - TOS per-flight right mouse menu CLOSED</p> <p>ATDI-5201 - Display route options directly from the right-click menu CLOSED</p> <p>ATDI-5257 - Timeline right-click menu should show APPROVE with the list of submitted routes CLOSED</p>	D, T	ATD2-P3-FF-3
1.3.11.	Flight Operator clients exclude flights from TOS.	iads-client	5.4	<p>ATDI-5614 - Ability to right-click and exclude a single flight from the TOS Table CLOSED</p>	D, T	ATD2-P3-BF-5
1.3.12.	Flight Operator clients undo TOS routes submissions.	iads-tos iads-client	5.0	<p>ATDI-4716 - TOS per-flight right mouse menu CLOSED</p> <p>ATDI-5201 - Display route options directly from the right-click menu CLOSED</p> <p>ATDI-5257 - Timeline right-click menu should show APPROVE with the list of submitted routes CLOSED</p>	D, T	ATD2-P3-FF-5
1.3.13.	Metroplex Planner clients approve submitted TOS routes.	iads-tos iads-client	5.0	<p>ATDI-4716 - TOS per-flight right mouse menu CLOSED</p>	D, T	ATD2-P3-FF-4




Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-5201 - Display route options directly from the right-click menu CLOSED</p> <p>ATDI-5257 - Timeline right-click menu should show APPROVE with the list of submitted routes CLOSED</p> <p>ATDI-5121 - Allow for the user to approve a specific route in the Flight TOS Menu CLOSED</p>		
1.3.14.	Metroplex Planner clients undo TOS route approvals.	iads-tos iads-client	5.0	<p>ATDI-4716 - TOS per-flight right mouse menu CLOSED</p> <p>ATDI-5201 - Display route options directly from the right-click menu CLOSED</p> <p>ATDI-5257 - Timeline right-click menu should show APPROVE with the list of submitted routes CLOSED</p>	D, T	ATD2-P3-FF-5
1.3.15.	STBO displays flight routes for each flights, including filed route and TOS routes.	iads-client: Map	5.0	<p>ATDI-4543 - IDS5 Display flight route data as layer on Metroplex TMI client CLOSED</p>	D	ATD2-P3-FE-12-1

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1.3.16.	<p>STBO displays flights with TOS routes in the following coordination states:</p> <ul style="list-style-type: none"> Submitted Approved Reroute filed 	iads-client: Timeline	5.0 5.2.1 5.3	<p>ATDI-4559 - Timelines should show TOS status CLOSED</p> <p>ATDI-5083 - Move "T" and delay values to the far right of the datatag CLOSED</p> <p>ATDI-5045 - Display delay and "T" on the right side of the data tag on the right side of the timeline CLOSED</p> <p>ATDI-5470 - MP: Keep "T" after approval and change color from white to green CLOSED</p> <p>ATDI-5567 - Add Green highlighted T when coordination state is Reroute Filed CLOSED</p>	D, T	ATD2-P3-FE-9
1.3.17.	<p>STBO produces audio and visual alerts whenever TOS routes are:</p> <ul style="list-style-type: none"> Submitted Approved 	iads-client	5.9 5.10 5.11.2	<p>ATDI-6138 - MP: Submit/Approve TOS Route Alert (Visual) CLOSED</p> <p>ATDI-6165 - MP: Submit/Approve TOS Route Alert (Audio) RESOLVED</p> <p>ATDI-6523 - Turn ON TOS visual alerts in ops system CLOSED</p>	I, D, T	ATD2-P3-FF-9-2 ATD2-P3-FE-5-1 ATD2-P3-FE-9

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				<p>ATDI-6883 - Clearing of TOS pop-up alerts CLOSED</p> <p>ATDI-6970 - Display TOS pop-up when on state change from "Submitted" to "Reroute Filed" CLOSED</p>		
1.3.18.	STBO displays user-entered notes for TOS flights.	iads-client: TOS Table	5.0 5.11	<p>ATDI-4567 - Allow scratch pad entries from the flight specific TOS table CLOSED</p> <p>ATDI-4643 - Add scratch pad to Fuser and FMC flights CLOSED</p> <p>ATDI-6361 - Hide FO Scratch Pad Entries from Other Users (Exclude from TOS) CLOSED</p> <p>ATDI-7049 - Enhancements to Scratch Pad for TOS communication CLOSED</p>	D, T, I	ATD2-P3-FF-6
1.3.19.	STBO displays the departure fix of approved TOS routes.	iads-client: Timeline, Map, Table	5.0	<p>ATDI-4575 - Update timeline datablock to show TOS CDR CLOSED</p>	D, T	ATD2-P3-FE-9 ATD2-P3-FE-11-0 ATD2-P3-FE-12-1 ATD2-P3-BF-2
1.3.20.	STBO displays the availability of CDR routes.	iads-client: Map, TOS Route Availability Monitor	5.4 5.8	<p>ATDI-5742 - Short key - button at the top of the Map window to toggle the display of CDR 2-letter CLOSED</p>	D, I, T	ATD2-P3-FE-10 ATD2-P3-FE-11-0 ATD2-P3-FE-12-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
		iads-client: Map		<p>ATDI-5709 - Mark CDR as unavailable if fix is closed CLOSED</p> <p>ATDI-5697 - Enhance Map to show status of CDR availability CLOSED</p> <p>ATDI-6035 - Metroplex Planner: TOS Operation Tab and CDR Settings Window CLOSED</p> <p>ATDI-6136 - CDR Group constraints should update even when TOS Mode is inactive CLOSED</p>		
1.3.21.	STBO restrict CDRs from TOS operations: <ol style="list-style-type: none"> 1. Restrict entire CDR 2. Exclude specific destinations on a CDR 3. Include specific destinations on a CDR 	iads-client: TOS Route Availability Monitor	5.4 5.11.3	<p>ATDI-5696 - Expand TOS Operation tab to become TOS Reroute Availability Monitor CLOSED</p> <p>ATDI-6647 - CDR Settings Window: Select Multiple Rows at Once CLOSED</p>	D, T	ATD2-P3-FF-12 ATD2-P3-BF-4
1.3.22.	STBO displays a list of all CDRs: <ol style="list-style-type: none"> 1. CDR availability 2. CDR name 3. Orig 4. Dest 5. Dep Fix 6. Dep Gate 7. Transition Fix 	iads-client: TM Actions Panel iads-tos	5.7	<p>ATDI-5698 - Create a list of CDR that would be accessible from the TOS Reroute Availability Monitor CLOSED</p>	D	ATD2-P3-FE-11-0 ATD2-P3-BE-8

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
	8. Procedures					
1.3.23.	STBO allows for the option to filter display of CDRs by: <ol style="list-style-type: none"> 1. Availability (Yes/No) 2. Full CDR Name 3. CDR 2-digit Code 4. Dep Fix 5. Dep Gate 6. Transition Fix (SID) 7. Origin 8. Destination 	iads-client: TM Actions Panel iads-tos	5.7	ATDI-5698 - Create a list of CDR that would be accessible from the TOS Reroute Availability Monitor CLOSED	D	ATD2-P3-FE-11-0 ATD2-P3-BE-8
1.3.24.	STBO allows for the option to search CDRs by: <ol style="list-style-type: none"> 1. Any part of the CDR 8 alphanumeric code: <ol style="list-style-type: none"> a. Full CDR Name b. 2-digit CDR Code c. Destination d. Origin and destination 2. Dep Fix 	iads-client: TM Actions Panel iads-tos	5.7	ATDI-5698 - Create a list of CDR that would be accessible from the TOS Reroute Availability Monitor CLOSED	D	ATD2-P3-FE-11-0 ATD2-P3-BE-8
1.3.25.	STBO notifies users of changes in CDR availability.	iads-client: Notification Window	5.4	ATDI-5762 - Update the Notification Window with events when CDRs are restricted or reopened in the TOS Panel CLOSED	D	ATD2-P3-FE-2 ATD2-P3-FE-12-1
1.3.26.	IADS displays tos metrics on a web display.	iads-client	5.8 5.11 5.11.3 6.0	 ATDI-4535 - ATD-2 TOS Real-time Metrics Graph OPEN ATDI-6492 - Add OpenAPI Spec and Rest Service to TOS Service CLOSED	D, I	ATD2-P3-FE-11-0

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				 ATDI-6532 - ATD-2 TOS Web Server OPEN		
1.3.27.	IADS displays tos table data on a web display.	iads-client	6.0	 ATDI-6338 - Implement the TOS data table as a web-based display OPEN	D	ATD2-P3-FE-11-0
1.3.28.	Metroplex Planner clients configure TOS Tower-Center approval mode.	iads-client	6.0	<p>ATDI-6889 - Add TOS Tower-Center approval to Client notifications CLOSED</p> <p>ATDI-6879 - Add TOS Approval status to Client toolbar CLOSED</p> <p>ATDI-6880 - Add TOS approval handling to the Client CLOSED</p>	D, I	
1.4. User Interface - TMI	STBO includes Traffic Management Initiative (TMI) functionality.	iads-client iads-tmi	5.x	 ATDI-4480 - ATD-2 TOS Metroplex TMI Client OPEN		
1.4.1.	Metroplex Planner clients apply TMIs to specific airport(s).	iads-client: TM Actions Panel iads-tmi	5.0	<p>ATDI-4824 - Front-end capability to apply TMIs to a specific airport within metroplex CLOSED</p> <p>ATDI-4839 - Tracon TMIs need to use matching ID across all airports CLOSED</p> <p>ATDI-5095 - Problems with multi-airport TMIs CLOSED</p>	D, I, T	ATD2-P3-FE-12-0 ATD2-P3-FF-12

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-5132 - Improve metroplex TMI airport constraint modifications CLOSED</p> <p>ATDI-5133 - Consolidate Metroplex TMI's in TM Actions panel CLOSED</p> <p>ATDI-5134 - Single notification for Metroplex TMI's CLOSED</p> <p>ATDI-5207 - DAL fix TMI's don't show on the map CLOSED</p>		
1.4.2.	STBO displays Out The Gate (OTG) departure gate restrictions.	iads-client	5.0	<p>ATDI-5242 - Add OTG to TM Action Panel CLOSED</p> <p>ATDI-5283 - Display OTG on Notification Panel CLOSED</p> <p>ATDI-5244 - Show OTG next to closed fix on STBO Client CLOSED</p> <p>ATDI-5243 - Display OTG on notification panel, timelines, and flight table CLOSED</p>	A, D, T	ATD2-P3-FE-12-0

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
1.4.3.	STBO displays long-term TMIs.	iads-client: TM Actions Panel, map	5.5 5.6 5.7	<p>ATDI-5706 - Let users set end time for persisting taxiway closures CLOSED</p> <p>ATDI-5925 - Long-term Runway Closures in the TM Actions Panel CLOSED</p>	D, I, T	ATD2-P3-FE-12-0
1.4.4.	Metroplex Planner D10 TRACON client sets runway utilization for airports in the TRACON.	iads-client: TM Actions Panel	5.1	<p>ATDI-5399 - Problems with TRACON setting runway utilization CLOSED</p> <p>ATDI-5463 - Client: Adjust handling of TMI events CLOSED</p>	D	ATD2-P3-BF-4 ATD2-P3-FF-12
1.4.5.	STBO displays departure fix closures: <ol style="list-style-type: none"> 1. Departure fix closures 2. Departure fix closures with alternative fix 	iads-client: map, timeline	5.0 5.2 5.11	<p>ATDI-4541 - IDS5 Metroplex TMI client fix closures CLOSED</p> <p>ATDI-4544 - IDS5 Metroplex TMI client should react to TMI changes CLOSED</p> <p>ATDI-5486 - Options to display fix information on Timeline CLOSED</p> <p>ATDI-6458 - Remove fix closure filter by operator CLOSED</p>	D	ATD2-P3-FE-11-0 ATD2-P3-FE-12-0

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
1.4.6.	STBO displays Miles in Trail (MIT) restrictions.	iads-client: map, timeline	5.0	ATDI-4542 - IDS5 Metroplex TMI client Miles in Trail restrictions CLOSED ATDI-4544 - IDS5 Metroplex TMI client should react to TMI changes CLOSED		ATD2-P3-FE-11-0 ATD2-P3-FE-12-0
1.4.7.	STBO displays DCC Advisories (ATCSCC Advisories).	iads-client: TM Actions Panel	5.8 5.11.3	ATDI-6068 - Metroplex Planner: DCC Route Advisory Tab CLOSED ATDI-6169 - Add TM route advisory tab to the FO clients CLOSED ATDI-6731 - Update Name of DCC Route Advisories Tab CLOSED	T, D, I	ATD2-P3-BF-4 ATD2-P3-FF-12 ATD2-P3-FE-12-0
1.4.8.	STBO configures APREQ Pre-Scheduling.	iads-client	5.8	ATDI-6061 - Add APREQ preschedule tab to STBO Settings Window CLOSED	D, T	ATD2-P3-BE-16 ATD2-P3-BF-4 ATD2-P3-FF-12

2 Trajectory Option Set

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
2. Trajectory Option Set	IADS includes Trajectory Option Set (TOS) functionality.	iads-tos		 ATDI-4340 - ATD-2 Trajectory Option Set Infrastructure OPEN		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
2.1.1.	<p>The TOS Service generates a Trajectory Option Set of TOS Routes for applicable departure flights under the following rules:</p> <ol style="list-style-type: none"> 1. TOS route does not include the same departure gate as filed route 2. AND TOS route is an allowed route 3. AND TOS route is an available CDR 4. AND Domestic/OCONUS routes only 5. AND is not in the UNCERTAIN group 6. AND is not included in an existing TMI: <ol style="list-style-type: none"> a. APREQ b. EDCT c. Ground Stop 	iads-tos	5.0 5.1 5.2.1 5.3 5.4 5.4.1	<p>ATDI-4499 - TOS Service Part 3 (TOS Generator) CLOSED</p> <p>ATDI-4500 - TOS Service Part 1 (new ATD2 component) CLOSED</p> <p>ATDI-4645 - TOS Service Part 5 (Metroplex) CLOSED</p> <p>ATDI-4662 - TOS Service Part 2 (FMC integration) CLOSED</p> <p>ATDI-4722 - TOS Service Part 4 (additional data elements) CLOSED</p> <p>ATDI-5177 - Allow filtering out unallowable TOS options CLOSED</p> <p>ATDI-5178 - Allow hiding TOS routes through same departure gate as filed route CLOSED</p> <p>ATDI-5308 - Filter out international flights in the TosService CLOSED</p>	D, I, T	ATD2-P3-BE-1 ATD2-P3-BE-2

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-5561 - Filter flights in UNCERTAIN group out of the TOS flights CLOSED</p> <p>ATDI-5713 - Auto-exclude TOS for flights in TMIs CLOSED</p> <p>ATDI-5703 - TosService integration with FMC CDRs CLOSED</p> <p>ATDI-5702 - Setup TMI utility for evaluating defined CDR restrictions CLOSED</p> <p>ATDI-5700 - Disable non-corner CDRs from adaptation CLOSED</p> <p>ATDI-5863 - Change APREQ EDCT and GS flight TOS state from NOT APPLICABLE to ATC EXCLUDED CLOSED</p>		
2.1.2.	The TOS Service uses NFDC CDR inputs to generate TOS routes for departure flights.	iads-tos	4.3 5.0 5.10 6.0	<p>ATDI-4494 - Improve RouteParser Capability CLOSED</p> <p>ATDI-5955 - Update CDR parsing to include all fields from NFDC CDR database CLOSED</p>	D, I, T	ATD2-P3-BE-2

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
2.1.3.	The TOS Service excludes ineligible flights from TOS. <ol style="list-style-type: none"> 1. APREQ 2. EDCT 3. GS 	iads-tos	5.4.1	ATDI-5863 - Change APREQ EDCT and GS flight TOS state from NOT APPLICABLE to ATC EXCLUDED CLOSED	D	ATD2-P3-BE-4 ATD2-P3-BE-5
2.1.4.	The TOS Service computes for TOS routes: <ol style="list-style-type: none"> 1. Route Distance 2. Relative Trajectory Cost (RTC) 3. Relative Trajectory Cost upper and lower thresholds 	iads-tos	5.0 5.1 5.2.2 5.11.3	ATDI-4499 - TOS Service Part 3 (TOS Generator) CLOSED ATDI-5574 - Flow based RTC calculations in TOS Service CLOSED ATDI-4862 - Airline-specific TOS RTC computations CLOSED ATDI-5131 - Add flag to disable use of airline specific RTC values CLOSED ATDI-5203 - Keep track of eligibility to originally filed route after approval CLOSED ATDI-6526 - Incorporate Envoy RTC values into TOS Service CLOSED	D, I, T	ATD2-P3-BF-6
2.1.5.	The TOS Service computes TOS Route Delay Saving using: <ol style="list-style-type: none"> 1. UTOT 2. OR UTOT at Pushback 3. OR ETOT 	iads-tos	5.2	ATDI-5513 - Add option to compute TOS delay savings using ETOT CLOSED	I	ATD2-P3-TS-7

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-5509 - Switch TOS delay mode to UTOT CLOSED		
2.1.6.	TOS routes include TOS Coordination states: <ol style="list-style-type: none"> 1. NOT_SUBMITTED, 2. OPERATOR_EXCLUDED, 3. ATC_EXCLUDED, 4. OPERATOR_SUBMITTED, 5. ATC_ASSIGNED, 6. ATC_REJECTED, 7. ATC_APPROVED, 8. REROUTE_FILED 	iads-tos	5.0 5.4	ATDI-4500 - TOS Service Part 1 (new ATD2 component) CLOSED ATDI-5615 - Change in TOS service to support single-flight and global exclusions CLOSED ATDI-7045 - Revert REROUTE_FILED state upon new filed route CLOSED	D, I, T	ATD2-P3-BF-5 ATD2-P3-BE-5
2.1.7.	TOS routes include TOS Eligibility states: <ol style="list-style-type: none"> 1. NOT_APPLICABLE, 2. EXCLUDED, 3. POTENTIAL, 4. EXPIRED, 5. CANDIDATE 	iads-tos	5.0 5.4	ATDI-4500 - TOS Service Part 1 (new ATD2 component) CLOSED ATDI-5615 - Change in TOS service to support single-flight and global exclusions CLOSED	D, I, T	ATD2-P3-BF-5 ATD2-P3-BE-4
2.1.8.	The TOS Service determines the TOP TOS route based on the following criteria: <ol style="list-style-type: none"> 1. ATC_APPROVED route 2. SUBMITTED route with most delay savings over RTC and least additional nm value 3. CANDIDATE route with most delay savings over RTC and least additional nm value 	iads-client: TOS Table	5.1 5.8 5.11.2	ATDI-5199 - Top route display in the TOS Departure Table CLOSED ATDI-6092 - Update TOS Top route criteria CLOSED	T, I	ATD2-P3-BF-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
	4. POTENTIAL route with most delay savings over RTC (least negative) and least additional nm value			ATDI-6617 - Include additional nm to the determination of the top route CLOSED		
2.1.9.	The TOS Service retains the NAS-filed route as the filed route, regardless of approved TOS route status.	iads-tos	5.1	ATDI-5203 - Keep track of eligibility to originally filed route after approval CLOSED	D, T	ATD2-P3-BF-2 ATD2-P3-FE-11-0
2.1.10.	The TOS Service excludes individual flights from TOS.	iads-tos	5.4	ATDI-5714 - Individual Flight Exclusion support in TosService CLOSED ATDI-5615 - Change in TOS service to support single-flight and global exclusions CLOSED	D, T	ATD2-P3-BF-5
2.1.11.	The TOS service models approved TOS routes.	iads-tos	5.0 5.2	ATDI-4645 - TOS Service Part 5 (Metroplex) CLOSED ATDI-4795 - Integrate TOS results into Model CLOSED ATDI-4784 - TOS Service Handling for Approve Route CLOSED	D, I, T	ATD2-P3-FF-4 ATD2-P3-BE-7 ATD2-P3-BE-5 ATD2-P3-BF-1 ATD2-P3-BE-2

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-5500 - TOS Service should use filed route for matching CDR to filed routes CLOSED		
2.1.12.	The TOS Service records exclusion reasons for unavailable CDRs.	iads-tos	5.5	ATDI-5903 - Add exclusion reasons to FMC CDR references CLOSED	D, I	ATD2-P3-BE-3-1
2.1.13.	The TOS Service sets TOS Tower-Center approval mode.	iads-tos	6.0	ATDI-6847 - Add TOS Tower-Center Approval Mode and Time to Expiration CLOSED	D, I	
2.1.14.	The TOS Service sets TOS 'Time to Expiration'.	iads-tos	6.0	ATDI-6847 - Add TOS Tower-Center Approval Mode and Time to Expiration CLOSED		
2.1.15.	IADS computes TOS Real-time Metrics: <ul style="list-style-type: none"> • Delay Savings • Probability Delay Savings > 0 • Probability Delay Savings > RTC • Delay Savings Mean • Delay Savings Percentiles 	iads-tos-delay-savings	6.0	ATDI-6685 - Add probability delay savings to tos-delay-savings-ovc CLOSED ATDI-6118 - Integrate TOS delay savings script into IadsAssembler CLOSED ATDI-6090 - Add real time delay metrics to TOS backend data CLOSED ATDI-6896 - Capture TOS Delay Savings request and response CLOSED	D, I	

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
2.1.16.	The TOS Service computes TOS IN Delay: 1. IN Delay 2. IN Delay Savings	iads-tos	5.11.3	ATDI-6687 - Add IN delay savings to TOS table CLOSED ATDI-6688 - Added Predicted IN delay to TOS table CLOSED ATDI-6689 - Add sum of predicted IN delay and IN delay savings to TOS table CLOSED	D, I	ATD2-P3-FE-11-0
2.1.17.	The TOS Service models route amendments.	iads-tos	6.0.0	ATDI-7045 - Revert REROUTE_FILED state upon new filed route CLOSED ATDI-7066 - Show rerouted TOS route even if eligibility=NOT_APPLICABLE CLOSED ATDI-6965 - Update TOS Logic to allow for route amendment after TOS submission CLOSED	D, T	



3 Traffic Management Initiatives

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
3. Traffic Management Initiatives	IADS includes TMI functionality.	iads-tmi		ATDI-412 - ATD-2 Flight TMI Service REOPENED ATDI-3219 - ATD-2 TMI Evolution - Modify TMIs OPEN		
3.1.1.	The TMI service sets TMIs for airports in the metroplex.	iads-tmi	5.5		D	ATD2-P3-BF-4
3.1.2.	The TMI Service by default only applies MIT restrictions to JET flights.	iads-tmi	5.5	ATDI-5918 - Only allow MIT restriction to apply to JETs CLOSED	D	ATD2-P3-BF-4
3.1.3.	The TMI Service sets TOS operations: <ul style="list-style-type: none"> Active Inactive 	iads-tmi	5.0	ATDI-4718 - Create TOS TMI CLOSED ATDI-6299 - Default TosMode to be active after the nightly reset CLOSED	D, I	ATD2-P3-FE-1 ATD2-P3-FF-1 ATD2-P3-FF-2 ATD2-P3-BF-0
3.1.4.	The TMI Service records and applies Out The Gate (OTG) departure gate restrictions.	iads-tmi	5.0	ATDI-5241 - Add OTG flag to ScheduledResourceStatus CLOSED ATDI-5237 - Define lookup mappings for inner/outer fixes CLOSED ATDI-5238 - Define OTG fix mappings CLOSED	A, D, T	ATD2-P3-FE-12-0 ATD2-P3-FE-13-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-5245 - Update and remove OTG restrictions as a single TMI CLOSED		
3.1.5.	The TMI Service records long-term TMIs.	iads-tmi	5.5 5.6 5.7	ATDI-5838 - Track long term closure flag in TMI updating CLOSED	D, I, T	ATD2-P3-FE-12-0
3.1.6.	The TMI Service activates, sets, and mediates constraints for CDR groups.	iads-tmi	5.8 5.9	ATDI-6053 - Structural changes for CDR Groups CLOSED ATDI-6057 - Refactor CDR group restricted logic CLOSED ATDI-6058 - Update CDR group mediation between USER and TFM entries CLOSED ATDI-6216 - Allow multiple CDRs to be set as preferred CLOSED	T, D	ATD2-P3-BF-3 ATD2-P3-BE-8 ATD2-P3-BE-3-1 ATD2-P3-BE-2 ATD2-P3-FE-12-1
3.1.7.	The TMI Service identifies CDRs that are not available due to terminal restrictions.	iads-tos	5.8	ATDI-6009 - Update TOS Operation tab and Map when terminal restrictions result in CDR to be ATC excluded CLOSED ATDI-6128 - CDRs should only be restricted if pair of fixes is closed CLOSED	D, I	ATD2-P3-FE-12-1 ATD2-P3-BE-8 ATD2-P3-FE-12-0

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
3.1.8.	The TMI Service identifies CDRs that are not available due to Reroute TMIs.	iads-tmi	5.5 5.8	<p>ATDI-5779 - Add reroute TMI management to TMI service CLOSED</p> <p>ATDI-5778 - Create FMC reroute TMI class CLOSED</p> <p>ATDI-5777 - Publish reroute messages from TFM Flow to TMI Service CLOSED</p> <p>ATDI-6055 - TMI TOS listener for reroute advisories CLOSED</p> <p>ATDI-5985 - Parse TFM reroute advisories for adjacent centers CLOSED</p> <p>ATDI-6143 - CDR Group constraint logic should include protected segment check CLOSED</p> <p>ATDI-5889 - Update CDRs to include arrival centers CLOSED</p>	T, D	ATD2-P3-BF-2 ATD2-P3-BE-8
3.1.9.	IADS ingests TFM Flow data using the following rules to process TMI information: <ol style="list-style-type: none"> 1. Parse as a fix closure if a restriction has: <ol style="list-style-type: none"> a. OTG, 	iads-tmi	5.0 5.1 5.2 5.7 5.8	<p>ATDI-5240 - Define TMI Service TFM parsers CLOSED</p>	D, I, T	ATD2-P3-BF-3 ATD2-P3-BE-16

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
	<ul style="list-style-type: none"> b. ON INNERS, c. ON OUTERS, d. ON (FIX) <ul style="list-style-type: none"> 2. Parse as an MIT if If the qualifier is NONE and there is a milesInTrail value 3. Apply MIT to the rerouted fixes specified in the fix closures if the milesInTrail value is set in conjunction with another qualifier 4. Parse as a fix closure with CDR for "swap" TFM Flow messages 5. Reroute Advisories <ul style="list-style-type: none"> a. Reroute parsing for "WEATHER" reason b. Reroute parsing for adjacent centers 6. FCA/AFP reroute messages 			<ul style="list-style-type: none"> — ATDI-5245 - Update and remove OTG restrictions as a single TMI CLOSED — ATDI-5273 - Add OTG column to TMI tables CLOSED — ATDI-5274 - Add OTG flag to ClientFlight CLOSED — ATDI-5292 - Parse TFM OTG closure as gate instead of list of fixes CLOSED — ATDI-5236 - Refactor TmiService to return a list of restrictions when transforming TFM data CLOSED — ATDI-5239 - Create TfmMitTransformFactory in TmiService CLOSED — ATDI-5367 - Add swaps to TFM Flow parsing CLOSED — ATDI-5512 - Fix re-addition of cancellations from TFM Flow CLOSED 		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p> ATDI-5776 - ATD-2 TFM Reroute Advisory Parsing OPEN</p> <p>ATDI-5985 - Parse TFM reroute advisories for adjacent centers CLOSED</p> <p>ATDI-6015 - Allow TFM reroutes with WEATHER reason to be processed CLOSED</p> <p> ATDI-6490 - ATD-2 TMI Evolution - FCA/AFP Parsing OPEN</p>		
3.1.10.	IADS stores TFM FCA/AFP data			<p>ATDI-6513 - Store TMI Service proxied FCA data in database CLOSED</p> <p>ATDI-6514 - Store TMI Service proxied AFP data in database CLOSED</p> <p>ATDI-6663 - Add FCAs to TmiDatabase CLOSED</p> <p>ATDI-6664 - Add AFPs to TmiDatabase CLOSED</p> <p>ATDI-6503 - Add FCA data to NAS TMI database CLOSED</p>		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-6504 - Add AFP data to NAS TMI database CLOSED		
3.1.11.	The TMI Service ingests TFM Flow messages. <ul style="list-style-type: none"> Refresh Removal 	iads-tmi	5.1 5.2 5.3	ATDI-5432 - Add flag to disable processing TFM Flow refresh messages CLOSED ATDI-5511 - Disable TFM TMI refresh messages CLOSED ATDI-5545 - Handle TFM Flow Restrictions with '39' action type CLOSED	T	ATD2-P3-BF-3
3.1.12.	The TMI Service identifies CDRs that are not available due to FCAs.	iads-tmi	6.0	ATDI-6525 - Implement FCA/AFP TOS option filtering CLOSED ATDI-6670 - Include FCAs in CDR availability logic CLOSED	D, I	

4 Adaptation

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
4. Adaptation	IADS adapts to: <ul style="list-style-type: none"> D10 TRACON 	iads-adapt				

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
	<ul style="list-style-type: none"> Northeast Corridor (NEC) 					
4.1.1.	IADS models airports.	iads-model		🔍 ATDI-3212 - ATD-2 Model Bug Fixes and Generic Enhancements OPEN 🔍 ATDI-3214 - ATD-2 Model Backlog CLOSED		
4.1.2.	IADS adapts video maps for the D10 TRACON.	iads-adapt		Key Summary ATDI-3769 STBO: Update D10/DFW and CLT/CLT TRACON video maps ATDI-3173 11/30/17 Update for D10 TRACON video maps ATDI-2922 10/12/17 Update for D10 TRACON video maps ATDI-4103 Find D10 TRACON Video Maps file for DFW RNAV NORTH ATDI-4633 11/02/18 Update for D10 TRACON video maps Showing 5 out of 18 issues		
4.1.3.	IADS adapts TOS data for the D10 TRACON.	iads-adapt iads-tos		Key Summary ATDI-5770 Update TOS Adaptation Data to Oct 10, 2019 ATDI-6214 Update TOS Adaptation Data to March 26, 2020 ATDI-6266 Update TOS Adaptation Data to May 21, 2020 ATDI-6373 Update TOS Adaptation Data to July 16, 2020		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-6489 Update TOS Adaptation Data to Sept 10, 2020 Showing 5 out of 10 issues		
4.2. DFW	IADS models the DFW terminal.	iads-adapt, iads-model	5.x	ATDI-4011 - ATD-2 DFW Adaptation Updates OPEN ATDI-6233 - New DFW scenarios to support all east or all west runway usage CLOSED ATDI-6904 - 2021 update to the DFW surface map CLOSED ATDI-6733 - Add DFW 31L Runway Configuration CLOSED ATDI-6820 - Add flag to not parse TOBT or TMAAT for DFW CLOSED	D, T	ATD2-P3-BF-3 ATD2-P3-BF-4
4.2.1.	IADS assigns runways to DFW departures based on the flight's originally filed departure fix.	iads-adapt	5.5	ATDI-5908 - Use default departure fix for runway assignment at DFW CLOSED	D	ATD2-P3-BF-3 ATD2-P3-BF-4
4.2.2.	IADS identifies when DFW departures are assigned to inner or outer departure fixes.	iads-adapt	5.5	ATDI-5812 - Enable model to derive if flight is an inner or outer fix departure based departure runway and fix CLOSED	I	ATD2-P3-BF-3 ATD2-P3-BF-4

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
4.2.3.	IADS identifies DFW departures' runway queue.	iads-model iads-adapt	5.6	ATDI-5870 - Identify active AMA taxing flight in their respective runway queues CLOSED	D, I	ATD2-P3-TS-2
4.3. DAL	IADS models the DAL airport.	iads-client: Map, timeline iads-model	5.0 5.1 5.2 5.11.1	ATDI-4478 - ATD-2 DAL Adaptation Updates OPEN ATDI-4736 - update surface map adaptation for DAL CLOSED ATDI-4735 - create asde_layout for DAL airport CLOSED ATDI-4956 - Setup DAL configuration and runway TBFM mappings CLOSED ATDI-4918 - modify DAL departure_fix_decision_tree to account for SAT as waypoint and destination CLOSED ATDI-5416 - Update Taxi Speeds for DAL Airport CLOSED ATDI-5342 - Add DAL surface layout to map CLOSED	A, D, I, T	ATD2-P3-BF-3 ATD2-P3-BF-4

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-6349 - Update AMS to TBFM configuration mapping to include scenarios CLOSED ATDI-6480 - Enable Actual Delay calculations for KDAL CLOSED		
4.3.1.	IADS updates DAL airport configuration to match DFW airport configuration. This feature has been disabled in ATDI-5431.	iads-model	5.0 5.1	ATDI-5105 - Update DAL airport configuration to mirror DFW CLOSED ATDI-5431 - Disable DAL airport configuration mirroring CLOSED	D	ATD2-P3-BF-3 ATD2-P3-BF-4
4.3.2.	The Terminal Scheduler schedules DAL departures with wake turbulence separation regardless of departure flights' assigned runway.	iads-scheduler	5.1	ATDI-5355 - Update DAL separations to add dependencies between runways CLOSED	T	ATD2-P3-BF-3 ATD2-P3-BF-4 ATD2-P3-TS-3 ATD2-P3-TS-5
4.3.3.	IADS sets flight state to "TAXI_OUT" within N minutes of receiving an AOBT for flights departing DAL. (N = 0 minutes)	iads-model	5.2	ATDI-5474 - DAL flights should go directly to TAXI_OUT on receiving AOBT CLOSED	I	ATD2-P3-BF-3 ATD2-P3-BF-4
4.3.4.	IADS automatically updates DAL runway configuration.	iads-model	5.4 5.11	ATDI-5441 - Enable automatic airport configuration detection for DAL CLOSED	D	ATD2-P3-BF-3 ATD2-P3-BF-4

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-6364 - Update Love Field runway scenario upon runway closure/reopening CLOSED</p>		
4.4. Small Airports	<p>IADS models airports in the D10 TRACON:</p> <ul style="list-style-type: none"> • DTO • FTW • FWS • GKY • GPM • NFW • RBD • TKI • ADS • AFW 	<p>iads-client: Map, timeline iads-model iads-adapt iads-small-airport-model</p>	<p>5.1 5.2 5.3 5.7 5.11 6.0</p>	<p>ATDI-5102 - ATD-2 Small Airport Model Enhancements OPEN</p> <p>ATDI-5451 - Update asde layout files for AFW, FWS, GPM, FWH CLOSED</p> <p>ATDI-6337 - Update map and taxiways at D10 airports (non-DFW) CLOSED</p> <p>ATDI-6635 - Update map and taxiways at D10 airports (FTW, FWS, RBD) CLOSED</p> <p>ATDI-4226 - Create DAL small airport model CLOSED</p> <p>ATDI-5209 - Update small airport model to work for multiple airports CLOSED</p> <p>ATDI-6059 - Increase small airport model calling tactical scheduler planning window to 480 minutes CLOSED</p>	D, I, T	<p>ATD2-P3-BF-3 ATD2-P3-BF-4 ATD2-P3-TS-9</p>

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
4.5. Northeast Corridor (NEC)	IADS adapts to the Northeast Corridor (NEC).	configuration	6.1.0	ATDI-7320 - ATD-2 NEC STBO Setup OPEN		
4.5.1. NEC Airports	IADS adapts to airports in the NEC.	iads-adapt	6.1.0	ATDI-7367 - ATD-2 EWR Airport Updates for ML Comparison Analysis OPEN ATDI-7368 - ATD-2 JFK Airport Updates for ML Comparison Analysis OPEN ATDI-7369 - ATD-2 LGA Airport Updates for ML Comparison Analysis OPEN		

5 Scheduler

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
5. Scheduler	IADS schedules flights.	iads-scheduler		ATDI-4157 - ATD-2 Upgrading the STBO's Scheduler to fully support ATD-2 phase-2 CLOSED ATDI-4491 - ATD-2 Terminal Scheduler OPEN		
5.1. Terminal Scheduler	The Terminal Scheduler system schedules flights with the following times: <ul style="list-style-type: none"> • Gate • Spot • Runway • Departure Fix 	iads-scheduler		ATDI-4491 - ATD-2 Terminal Scheduler OPEN		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
5.1.1.	The Terminal Scheduler integrates the Tactical Scheduler into the terminal scheduling system.	iads-scheduler	5.0 5.2 5.7 5.10	<p>ATDI-4756 - Implement terminal scheduler core algorithm CLOSED</p> <p>ATDI-4802 - Adapter to bridge between Terminal Scheduler and Tactical Scheduler CLOSED</p> <p>ATDI-5279 - Option for terminal scheduler to use predicted STA instead of final STA from Tactical Scheduler CLOSED</p> <p>ATDI-6031 - Option to allow Primary Scheduler to use Embedded Tactical Scheduler for DAL CLOSED</p> <p>ATDI-5921 - Apply slot algorithm concept to the departure fix scheduler CLOSED</p>	I	ATD2-P3-TS-9
5.1.2.	The Terminal Scheduler schedules arrival flights.	iads-scheduler	5.3	<p>ATDI-5514 - Add arrivals to the terminal scheduler CLOSED</p>	I	
5.1.3.	The Terminal Scheduler passes a flight's TCOT to the tactical scheduler if: <ol style="list-style-type: none"> the flight has a MIT restriction at the departure fix OR there is a default separation at the departure fix 	iads-scheduler iads-tos	5.0 5.1	<p>ATDI-5164 - Terminal scheduler changes to prevent gaps in schedule CLOSED</p>	D, I	ATD2-P3-TS-5 ATD2-P3-TS-9 ATD2-P3-TS-11

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-5294 - Pass terminal delay to airport scheduler after specified iteration CLOSED</p> <p>ATDI-5348 - Update fix scheduler sort times and check on terminal delay each iteration CLOSED</p>		
5.1.4.	<p>The Terminal Scheduler schedules the following times for departure flights:</p> <ol style="list-style-type: none"> 1. Takeoff times (Terminal Constrained Off Times) 2. Departure Fix times (Terminal Constrained Departure Fix Times) <p>The Terminal Scheduler ensures all the following constraints are satisfied:</p> <ol style="list-style-type: none"> 1. MIT 2. APREQ/EDCT 3. Departure Fix Closures 4. Runway Closures 5. Airport Configurations 	iads-scheduler	5.0 5.6	<p>ATDI-4693 - Create Terminal Scheduler project CLOSED</p> <p>ATDI-4756 - Implement terminal scheduler core algorithm CLOSED</p> <p>ATDI-5926 - Basic Slot Algorithm for Tracon Scheduler CLOSED</p>	I, D	ATD2-P3-TS-5 ATD2-P3-TS-6 ATD2-P3-TS-10 ATD2-P3-TS-3
5.1.5.	<p>The Terminal Scheduler computes the following times for departure flights' original filed routes and each flights' TOS routes.</p> <ol style="list-style-type: none"> 1. Terminal Constrained Off Time (TCOT) 2. Target Takeoff Time (TTOT) 3. Estimated Departure Fix Time (EDFT) 	iads-scheduler	5.0 5.8	<p>ATDI-4759 - Terminal Scheduler - TOS and WhatIf Integration CLOSED</p> <p>ATDI-5070 - Update TTOT for alternate TOS routes CLOSED</p>	I	ATD2-P3-TS-5 ATD2-P3-TS-6

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-6170 - Whatif flights getting TCOTs earlier than UTOTs CLOSED</p> <p>ATDI-5853 - Use tactical scheduler as what-if airport scheduler CLOSED</p>		
5.1.6.	The Terminal Scheduler computes the transit time from the runway to the departure fix for filed routes and TOS routes.	iads-scheduler iads-model	5.0	<p>ATDI-4694 - Create transit time service to be used by the Terminal Scheduler CLOSED</p> <p>ATDI-4917 - Integrate transit time service into terminal scheduler CLOSED</p> <p>ATDI-4922 - Add transit time source to flight and database CLOSED</p> <p>ATDI-5073 - Update DepartureAirborneModel to use default speed of 0 until flight departs CLOSED</p> <p>ATDI-5142 - Update departure airborne model to use new speed values CLOSED</p>	I, T	ATD2-P3-TS-1
5.1.7.	The Terminal Scheduler ensures that delay is the same for routes with the same departure fix.	iads-scheduler	5.0 5.8	<p>ATDI-4952 - Flight TOS route delay should match filed route delay for same departure fix CLOSED</p>	I	ATD2-P3-TS-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-6142 - Additional WhatIf Scheduler Filter For Option Flights CLOSED		
5.1.8.	The Terminal Scheduler schedules flights subject to an APREQ or EDCT at the APREQ or EDCT time.	iads-scheduler iads-tactical	4.7 5.0 5.2	ATDI-4756 - Implement terminal scheduler core algorithm CLOSED ATDI-5508 - For flights with EDCT, TOS ETOTs are 5 minutes less than filed route ETOTs CLOSED	I	ATD2-P3-TS-3 ATD2-P3-TS-10
5.1.9.	The Terminal Scheduler applies MIT separation constraint for departure flights with UTOT within the MIT end time.	iads-scheduler	5.0	ATDI-5100 - Limit MIT separation constraint to end time of MIT restriction CLOSED	D	ATD2-P3-TS-3
5.1.10.	The Terminal Scheduler allows for the option to set default aircraft speed in order to compute MIT separation times.	iads-model	5.0	ATDI-5127 - Update MIT speed conversion logic CLOSED	D	ATD2-P3-TS-3
5.1.11.	The Terminal Scheduler allows for the option to set default separation for a specific departure fix.	iads-scheduler	5.0	ATDI-5101 - Add ability to have default separation restriction over each fix CLOSED ATDI-5180 - Apply default MIT separation to EAST gate only CLOSED	D, I	ATD2-P3-TS-3

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
5.1.12.	The Terminal Scheduler uses undelayed take off time/UTOT at pushback as default for delay computations.	iads-scheduler	5.1	ATDI-5450 - Configure TosService to use UTOT at Pushback as Delay Basis CLOSED ATDI-6480 - Enable Actual Delay calculations for KDAL CLOSED	I	ATD2-P3-TS-7 ATD2-P3-TS-8
5.1.13.	The Terminal Scheduler allows for the option to use UTOT at pushback or current UTOT for delay computations.	iads-scheduler	5.1	ATDI-5410 - Add optional use of Undelayed at Pushback to TOS delay computation CLOSED ATDI-6480 - Enable Actual Delay calculations for KDAL CLOSED	T	ATD2-P3-TS-7 ATD2-P3-TS-8
5.1.14.	The Terminal Scheduler filters piston and turboprop flights from its scheduling process.	iads-scheduler	5.1	ATDI-5387 - Add piston and turboprop filtering to the terminal scheduler CLOSED	D	ATD2-P3-TS-3
5.1.15.	The Terminal Scheduler prioritizes departure flights over GA uncertain flights with condition: UTOT for departure flight - UTOT for GA Uncertain > N; (N = 30 minutes)	iads-scheduler	5.9.1 5.10	ATDI-6210 - Departure fix scheduler de-prioritize GA uncertain flights CLOSED ATDI-6217 - Departure fix scheduler limits GA uncertain flights disadvantage time to 30 minutes. CLOSED	D	ATD2-P3-TS-3

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
5.1.16.	The Terminal Scheduler applies default MIT restrictions (N = 5 MIT for EAST gate only) when departure fixes are combined.	iads-scheduler	5.0 5.1	ATDI-5191 - Automatically apply default MIT if fixes are combined CLOSED ATDI-5180 - Apply default MIT separation to EAST gate only CLOSED	D, I	ATD2-P3-TS-3
5.1.17.	The Terminal Scheduler schedules internal departures.	iads-scheduler	5.3	ATDI-5548 - Update Terminal Scheduler to allow internal departures CLOSED	I	ATD2-P3-TS-3
5.1.18.	The Terminal Scheduler includes separation based on converging runways for DFW.	iads-scheduler	5.4.1	ATDI-5850 - Include DFW converging runway separation in terminal what-if airport scheduler CLOSED	I	ATD2-P3-BF-3 ATD2-P3-BF-4 ATD2-P3-TS-3 ATD2-P3-TS-5
5.1.19.	The Terminal Scheduler computes TOS Metrics: <ol style="list-style-type: none"> 1. Aggregated delay savings 2. Average delay savings 3. Number of flights affected by delay savings 4. Probability delay savings > RTC 	iads-scheduler	5.8 5.11 5.11.3	ATDI-6073 - WhatIf scheduler calculates aggregated delay change CLOSED ATDI-6126 - Adding Aggregated Runway Delays to ToS Service CLOSED	D, I	ATD2-P3-FE-11-0
5.2. Tactical Scheduler	The Tactical Scheduler schedules flights with times on the terminal surface: <ul style="list-style-type: none"> • Gate • Spot • Runway 	iads-tactical		Key Summary ATDI-6604 ATD-2 Tactical Scheduler ATDI-5927 ATD-2 Tactical Scheduler 5.6		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-5921 Apply slot algorithm concept to the departure fix scheduler ATDI-5891 ATD-2 Tactical Scheduler 5.5 ATDI-5761 New optional algorithm in the tactical scheduler to improve DFW's departure prediction accuracy by modeling the divergent departure operation Showing 5 out of 27 issues		
5.2.1.	The Tactical Scheduler ingests TCOT from the Departure Fix Scheduler for each iteration.	iads-tactical	5.0	ATDI-5029 - Make tactical scheduler adhere to TCOT CLOSED ATDI-4825 - TerminalSlotNetwork - Update flight object for TCOT functionality CLOSED ATDI-4802 - Adapter to bridge between Terminal Scheduler and Tactical Scheduler CLOSED	I, T	ATD2-P3-TS-9 ATD2-P3-TS-11
5.2.2.	The Tactical Scheduler integrates TCOT as a part of the Order of Consideration grouping within the RBS scheduling algorithm.	iads-tactical	5.0 5.1	ATDI-4798 - TerminalSlotNetwork - Process terminal scheduler controlled off time in SurfaceSlotNetwork CLOSED ATDI-5291 - Add TCOT slot eligibility buffer CLOSED	D	ATD2-P3-TS-9 ATD2-P3-TS-11

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
5.2.3.	The Tactical Scheduler passes surface constrained takeoff times to the terminal scheduler.	iads-tactical	5.2	ATDI-5279 - Option for terminal scheduler to use predicted STA instead of final STA from Tactical Scheduler CLOSED	D, I	ATD2-P3-TS-3
5.2.4.	The Tactical Scheduler schedules DAL flights.	iads-tactical	5.6 5.7	ATDI-5854 - Use tactical scheduler as stand-alone scheduler for KDAL CLOSED ATDI-6010 - Add DAL adaptation to tactical scheduler CLOSED ATDI-6030 - DAL tactical scheduler should use StrategicDmpNetwork CLOSED ATDI-6031 - Option to allow Primary Scheduler to use Embedded Tactical Scheduler for DAL CLOSED	D, I	ATD2-P3-BE-8 ATD2-P3-BF-3
5.2.5.	The Tactical Scheduler computes the following times for departure flights' original filed routes and each flights' TOS routes: <ol style="list-style-type: none"> 1. Target Takeoff Time (TTOT) 2. Estimated Departure Fix Time (EDFT) 	iads-tactical	5.8	ATDI-5853 - Use tactical scheduler as what-if airport scheduler CLOSED ATDI-5990 - Separate scheduling windows for Primary Scheduler and Whatif Scheduler CLOSED	A	ATD2-P3-BE-8

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
5.2.6.	The Terminal Scheduler allows controlled flights to be eligible for a TTOT slot that is N minutes earlier than its TCOT (N = 2 minutes).	iads-tactical	4.8 5.4	ATDI-5692 - Allow controlled flight to compete for TTOT slot earlier than it's controlled time CLOSED		ATD2-P3-TS-5

6 Flight Data Ingestion and Processing


Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
6. Flight Data Ingestion and Processing	IADS ingests and processes flight data.	iads-fuser iads-flight				
6.1. Fuser	The Fuser ingests flight data from multiple sources.	iads-fuser	5.x	ATDI-2031 - ATD-2 DFW Fuser Integration CLOSED ATDI-3905 - Single Fuser for DFW and DAL CLOSED ATDI-5730 - ATD-2 Dependency Migration OPEN ATDI-4184 - Metroplex commander configuration for DFW and DAL CLOSED ATDI-6267 - Setup Fuser to read/publish using multiple brokers CLOSED	D, I	ATD2-P3-BF-3 ATD2-P3-FE-11-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				⚡ ATDI-6283 - ATD-2 Fuser Extraction OPEN ⚡ ATDI-2444 - ATD-2 Fuser Refinements and Bug Fixes REOPENED ⚡ ATDI-7011 - ATD-2 Sustainment rTBFM Removal OPEN		
6.1.1.	The Fuser ingests data for all D10 airports.	iads-fuser	5.2	ATDI-5091 - Add all D10 airports to the Fuser CLOSED	I	ATD2-P3-BF-3
6.1.2.	The Fuser ingests aircraft types.	iads-fuser	5.11.3 6.0	ATDI-6519 - Update Fuser aircraft types with latest changes CLOSED ATDI-7007 - Update Fuser aircraft types with latest changes CLOSED	I	
6.1.3.	The Fuser ingests TFM traversal data: <ol style="list-style-type: none"> 1. fix traversal 2. waypoint traversal 3. center traversal 4. sector traversal 	iads-fuser	5.11	ATDI-6308 - Add tfm traversal extension table to fuser data capture database CLOSED ATDI-6290 - TFM Parser Handling for Sector and BoundaryCrossing Messages CLOSED	I	ATD2-P3-BF-3
6.2. Aircraft	IADS ingests aircraft data.	iads-aircraft				
6.2.1.	IADS ingests aircraft type data.	iads-aircraft		⚡ ATDI-3788 - ATD-2 Aircraft Types OPEN	D	






Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-4776 - Implement LineOfFlight and Aircraft in FmcEnvelopeApi CLOSED ATDI-5780 - Aircraft Types: The 7360.1E update has arrived CLOSED		
6.3. Flight	IADS ingests flight data.	iads-flight				
	IADS identifies internal departure flights.	iads-flight	5.0 5.3	ATDI-4611 - Add new flight category for internal departures CLOSED	D	ATD2-P3-BF-3
6.4. Other						
6.4.1.	IADS ingests EOBT data. <ul style="list-style-type: none"> AAL, SWA 	iads-data iads-fuser	5.0 5.2	ATDI-4910 - SWA data parsing of EOBT's CLOSED ATDI-5438 - Integrate SWA EOBT to datahubs CLOSED ATDI-5437 - Connect to SWA EOBT test data CLOSED	I	ATD2-P3-BF-3 ATD2-P3-BE-13
6.4.2.	IADS ingests Mitre App data.	iads-data	5.0	ATDI-5080 - Enable Mitre App for Metroplex and DAL configurations CLOSED	D	ATD2-P3-BF-3
6.4.3.	IADS records TOS data.	iads-tos iads-databases	5.0 5.2 5.11.3	ATDI-4501 - TOS Database CLOSED	I, T	ATD2-P3-BE-3-2 ATD2-P3-BE-3-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-4790 - Add TOS computed values to DB CLOSED</p> <p>ATDI-5485 - Add TOS last update time to terminal_scheduler_whatif table CLOSED</p> <p>ATDI-6773 - Add delaySavingsOverZeroProbability to TOS database table CLOSED</p> <p>ATDI-6455 - Put scheduler run_id in tos_message table CLOSED</p>		
6.4.4.	IADS ingests FlightStats data. <ul style="list-style-type: none"> DFW, DAL 	iads-data	5.2	<p>ATDI-5480 - Combine DFW/DAL flight stats topics into a single stream CLOSED</p>	I	ATD2-P3-BF-3
6.4.5.	IADS ingests SFDPS data. <ol style="list-style-type: none"> CPDLC-DCL equipage data ATC sectors: <ol style="list-style-type: none"> dynamic sectors static sectors 	iads-fuser	5.2 5.11	<p>ATDI-4990 - Add CPDLC-DCL data element to the TOS Data CLOSED</p> <p>ATDI-5325 - Incorporate SFDPS data into the Fuser CLOSED</p> <p>ATDI-5499 - Add SFDPS route fields to Fuser and FMC CLOSED</p>	D, I, T	ATD2-P3-BF-3

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-6412 - Add sector computations to Fuser CLOSED ATDI-6376 - Improve Fuser handling of SFDPS messages CLOSED ATDI-6369 - Add ATC sector to Fuser position messages CLOSED		
6.4.6.	IADS identifies flights that require reporting in the OPSNET system.	iads-flight iads-fuser	5.5	ATDI-5880 - Add OPSNET flag to backend flight data CLOSED	T	ATD2-P3-BF-3
6.4.7.	IADS ingests TBFM Data. <ol style="list-style-type: none"> 1. Flight Plan Status (FPS) 2. Aircraft Status (ACS) 3. Departure Runway 4. Manually Scheduled 5. Coordination Time (CTM) 6. Departure Proposed Time 	iads-fuser iads-model	5.9 5.11	ATDI-6157 - Add TBFM super stream class to Fuser processing CLOSED ATDI-6273 - Add TBFM CTM field to Fuser tbfm_extension CLOSED ATDI-6303 - Add TBFM FPS and ACS to the TBFM extension CLOSED	I	ATD2-P3-BF-3
6.4.8.	IADS supports playback for: <ol style="list-style-type: none"> 1. DATIS database 2. TFDM database 3. TBFM 4. Weather database 	iads-data iads-playback tbfm- software iads-weather- service	5.11 6.0	ATDI-6391 - Datis Database Playback Support CLOSED ATDI-6390 - TFDM database playback support CLOSED	D, I	



Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				ATDI-6317 - Get playback mode working CLOSED ATDI-6691 - Add capture and playback logic to the weather parser and database CLOSED		
6.4.9.	IADS records data in the Data Warehouse.	iads-data iads-databases		 ATDI-5496 - ATD-2 Data Warehouse Refinements and Bug Fixes OPEN		




7 NAS Model



Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
7. NAS Model	IADS models the NAS using machine learning.	iads-nas-model iads-tmi iads-nas-tmi iads-transit-time-service iads-airport-configuration-prediction-model iads-fuser iads-terminal-scheduler	5.x 6.x	 ATDI-6236 - ATD-2 NAS Model OPEN  ATDI-6395 - ATD-2 NAS TMI Identification Service OPEN  ATDI-6397 - ATD-2 NAS TMI Service OPEN  ATDI-6544 - ATD-2 NAS Model Orchestration OPEN  ATDI-6546 - ATD-2 Departure Runway Model OPEN		

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
		iads-best-eta-service		⚡ ATDI-6547 - ATD-2 Arrival Runway Model OPEN ⚡ ATDI-6559 - ATD-2 Airport Configuration Prediction Model OPEN ⚡ ATDI-6566 - ATD-2 Unimpeded Taxi In Model OPEN ⚡ ATDI-6570 - ATD-2 Impeded Taxi In Model OPEN ⚡ ATDI-6574 - ATD-2 Unimpeded Taxi Out Model OPEN ⚡ ATDI-6578 - ATD-2 Impeded Taxi Out Model OPEN ⚡ ATDI-6582 - ATD-2 Estimated On Time Model OPEN ⚡ ATDI-6587 - ATD-2 Best ETA Service OPEN ⚡ ATDI-6593 - ATD-2 NAS Terminal Scheduler OPEN ⚡ ATDI-6608 - ATD-2 Transit Time Service OPEN		
7.1.	IADS displays a web page for NAS Model ML Validation.		6.x	⚡ ATDI-7286 - ATD-2 NAS Model ML Validation Web Page OPEN		
7.2.	IADS displays a web page for the NAS Model.		6.x	⚡ ATDI-7287 - ATD-2 NAS Model Realtime Web Display OPEN		

8 Other

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
8. Other	IADS includes all other necessary services.					
8.1.1.	IADS Test Tool displays and adjusts data in the IADS system.	iads-test-tool	5.x	ATDI-4502 - iadsTestTool TOS Plugin CLOSED ATDI-4701 - Fix usability bugs for TOS plugin in iadsTestTool CLOSED	D, T	
8.1.2.	IADS includes geometry services.	iads-geometry-service	6.0	 ATDI-6599 - ATD-2 Geometry Service OPEN		
8.1.3.	IADS includes weather services.	iads-weather-service	6.0	 ATDI-6552 - ATD-2 Weather Service OPEN		
8.1.4.	IADS is capable of sending Update MIT Constraint Request messages to TBFM WSRT.	tbfm-software	5.6 5.8	ATDI-5884 - TBFM Web Service Handle MIT Constraint Message CLOSED ATDI-5886 - IDAC Proxy Sends Update MIT Constraint Request to TBFM WSRT CLOSED ATDI-5888 - TMWS Soap Server Handles MIT Constraints Message CLOSED	T, I, D	ATD2-P3-TS-1

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-5961 - TMWS Updates MIT Constraint When Receiving MitConstraintUpdateRequest Message CLOSED</p> <p>ATDI-6209 - Modify DP to allow multiple MIT constraint messages with different flow times CLOSED</p>		
8.1.5.	IADS predicts and displays airport banks.	iads-bank-display	5.8 5.11	<p>ATDI-6089 - Add Bank Analysis web client to IadsAssembler CLOSED</p> <p>ATDI-6261 - Integrate new bank prediction project into build process CLOSED</p> <p>ATDI-6439 - Bank detection display REST services don't resolve CLOSED</p>	D	ATD2-P3-BF-3
8.1.6.	IADS builds, configures, and archives.	scripts iads-data configuration	5.x	<p> ATDI-3190 - ATD-2 Build, Configuration, Archiving OPEN</p> <p> ATDI-5922 - Updates to Terminal Scheduler Daily Report CLOSED</p>		
8.1.7.	IADS supports Industry Toolkit updates for SWIFT.	iads-fuser	5.x	<p> ATDI-4996 - ATD-2 Industry Toolkit Support OPEN</p>		
8.1.8.	IADS adapts to TBFM.	tbfm-adapt	5.x	Key Summary	D	

Spec ID	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods	Trace (Requirement ID)
				<p>ATDI-129 Load atc procedure adaptations.</p> <p>ATDI-239 Improve runway selection decision tree</p> <p>ATDI-410 ATC PROC TRACON DEPARTUR E ROUTE and ATC_DEFINED_SPEED</p> <p>ATDI-483 aircraft cannot be scheduled from tbfm EDC tgui</p> <p>ATDI-516 Add waypoints to TBFM adaptation</p> <p>Showing 5 out of 74 issues</p> <p> ATDI-4461 - Epic issue containing all issues relating to TBFM version updates OPEN</p> <p> ATDI-5885 - STBO Updates TBFM MIT Constraints OPEN</p>		