ATD-2 Integrated Arrival/ Departure/Surface (IADS)

System Specification - Core STBO Capabilities

(Phase 2)

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Purpose

This document contains the system specifications and requirements verification matrix for the core STBO capabilities developed during ATD-2 Phase 2 and Phase 3.

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1 Adaptation

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
DFW	The STBO implements terminal and surface modeling and configuration for the DFW airport.	Surface Modeling	3.0 - 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	A,D,I,T
DFW	The DASH allows users to select their DFW position when submitting their feedback: 1. East ATCT 2. West ATCT 3. Center ATCT 4. D10 TMU 5. D10 STMC Office 6. D10 TMO Office 7. AAL HCC (virtual ramp) 8. D Ramp 9. E Ramp 10. DFW Operations 11. DFW Environmental 12. ZFW TMU	UI: Feedback Page User Feedback Service	4.0	ATDI-4229 - Setup DFW Feedback Form CLOSED	D
CLT	The STBO groups departure fixes by jet stream for the EXBNDRY TRACON:	UI: Map, Timeline, Table	4.0	ATDI-4222 - Update dep fix to gate mapping CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	North - KRITR, WEAZL, JOTTA, NALEY, FLYNN West - BOBZY, HARAY, NEANO, DEBIE, ESTRR East- MERIL, KILNS, BARMY South - BEAVY, ICONS, KWEEN, HAMLN, ANDYS, BUCKL, TREAL "None" - CEGAL, JOJJO, PITTY, GANTS, GIPPR, PEKNN, RUNIE, LILLS	Surface Modeling			
DFW	The RTC indicates sector ownership on the DFW airport surface for each flight: A, B, C, D_AAL, D_DFW, E, and G.	UI: Flight Strip Surface Modeling	4.0	ATDI-4145 - RTC: For DFW, APREQ doesn't flash & RC ownership on flight strip is only G or T CLOSED	D
	The STBO implements a trajectory algorithm between gate to runway.	Surface Modeling	4.8 5.4	ATDI-4982 - Revert Model's Floyd-Warshall trajectory algorithm back to former Dijkstra-based path CLOSED	D
CLT	The STBO sets the ramp taxi speed of arrival flights at the CLT airport using the median value of all arrival ramp taxi speeds collected over a period of N days at the CLT airport (N = 7).	Surface Modeling	4.1	ATDI-4391 - CLT arrival taxi-in speed decision tree update CLOSED	A
CLT	The STBO sets the AMA taxi speed of arrival flights for each runway at the CLT airport using the median value of all arrival taxi-in speeds collected over a period of N days for each runway at the CLT airport (N = 7).	Surface Modeling	4.1	ATDI-4391 - CLT arrival taxi-in speed decision tree update CLOSED	A
DFW	The STBO sets the ramp taxi speed of arrival flights at the DFW airport using the median value of all arrival ramp taxi speeds collected over a period of N days at the DFW airport.	Surface Modeling	4.1 5.4	ATDI-3734 - DFW - departure and arrival taxi speeds CLOSED ATDI-5741 - DFW arrival taxi speed decision tree update CLOSED	A, I

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
DFW	The STBO sets the ramp taxi speed of departure flights at the DFW airport using the median value of all departure ramp taxi speeds collected over a period of N days at the DFW airport.	Surface Modeling	4.1	ATDI-3734 - DFW - departure and arrival taxi speeds CLOSED	A
DFW	The STBO sets the AMA taxi speed of arrival flights at the DFW airport using the median value of all arrival taxi-in speeds collected over a period of N days at the DFW airport.	Surface Modeling	4.1 5.4	ATDI-3734 - DFW - departure and arrival taxi speeds CLOSED ATDI-5741 - DFW arrival taxi speed decision tree update CLOSED	A, I
DFW	The STBO sets the AMA taxi speed of departure flights at the DFW airport using the median value of all departure taxi-in speeds collected over a period of N days at the DFW airport.	Surface Modeling	4.1	ATDI-3734 - DFW - departure and arrival taxi speeds CLOSED	A
	The STBO updates its model-derived spot to the position-derived spot for a departure flight entering AMA if the position-derived spot is detected to be within N nm from the model-derived spot (N = .01 nm for DFW airport; N = .04 nm for CLT airport).	Surface Modeling	4.3	ATDI-4942 - Reduce spot detection distance threshold CLOSED	I
DFW	The STBO sets gates designated to incur potential heavy gate conflict at the DFW airport 1. Heavies at D18 and D21 block D20 2. Heavies at A21X and A23X block A22	Surface Modeling	5.0	ATDI-5108 - DFW Gate updates CLOSED	D
CLT	The STBO assigns departure fix DEBIE or ESTRR for flights from CLT to the AND airport using the following criteria: 1. Aircraft weight category 2. AND Aircraft type	Surface Modeling	4.6	ATDI-5430 - CLT: Add AND airport to departure fix decision tree CLOSED	T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
CLT	The STBO allows flights departing from CLT ACON to have default parking gate assignment.	Surface Modeling	4.7 5.3	ATDI-5569 - Update CLT default gate decision tree ACON CLOSED	I
CLT	The STBO assigns gate A29 to flight operated by Spirit Airline (NKS).	Surface Modeling	4.8	ATDI-5677 - CLT update default gate decision tree CLOSED	T
CLT	The RTC displays spot "8" locations with their associated direction identifier: 1. Spot 8 South = "8S" 2. Spot 8 East = "8E"	Surface Modeling	4.8	ATDI-5629 - CLT Ramp wants to see spots 8S, 8E CLOSED	D

2 RTC User Interface & Capabilities

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The RTC allows the Ramp Controllers to update emergency status for each individual flight: 1. Mechanical Emergency 2. Medical Emergency	UI: Flight Strip Flight Management	4.0	ATDI-4239 - HF refinements to Medical and Emergency CLOSED ATDI-3630 - Flag Emergency Flight via right mouse menu CLOSED	D
	The RTC indicates super weight class aircraft category for each applicable flight.	UI: Flight Strip Aircraft Management	4.0	ATDI-4181 - Add indication for Super weight class category CLOSED	T
CLT, DFW	The RTC implements FAA and RECAT aircraft types.	Aircraft Management	4.0	ATDI-3790 - Update adaptation library to read aircraft types file with two weight class definitions CLOSED	D
DFW	The RTC displays FAA transition spots.	UI: Map	4.3	ATDI-4730 - RTC: Add a map option to display FAA spots CLOSED	D
DFW, CLT	The RTC displays Arrival Departure Window (ADW).	UI: Map Surface Modeling	5.1	ATDI-5286 - DFW - Adapt ADW CLOSED	D
	The RTC displays Airline provided Off Block Time/LOBT for each flight.	UI: Flight Menu RTC Interface with SMP	4.0	ATDI-4180 - RTC: Add L-Time to the Flight Menu CLOSED	D
DFW	The RTC displays drop points (a.k.a "hold points") at their respective locations on the ramp alleys.	UI: Map Surface Modeling	4.3	ATDI-4925 - RTC: Draw DFW's drop points on the map CLOSED	D, I

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
				ATDI-4723 - DFW - Add drop points to RTC map CLOSED	
DFW	The RTC allows the Ramp Controllers to indicate pushback directions and designated drop points/hold points for flights at gates.	UI: Flight Strip Surface Modeling	4.3	ATDI-4724 - DFW - update pushback procedures (tail direction label) CLOSED ATDI-4215 - DFW-RTC: Input and display push direction on RTC CLOSED	D, I
DFW	The RTC provides the Ramp Controllers the capability to hand off each flight to another sector owner.	UI: Flight Strip Surface Modeling	4.0	ATDI-4145 - RTC: For DFW, APREQ doesn't flash & RC ownership on flight strip is only G or T CLOSED	D
DFW	The RTC automatically detects and indicates each flight's airport surface sector ownership based on the flight's tracking location on the airport surface: 1. Ramp area 2. AMA area	UI: Fight Strip Surface Modeling	4.0	ATDI-4145 - RTC: For DFW, APREQ doesn't flash & RC ownership on flight strip is only G or T CLOSED	D
	The RTC automatically moves an arrival flight to its assigned gate if: 1. flight track location is within ramp and has gone stale for N seconds (N = 120) 2. AND flight is not manually moved to hardstand areas or on hold by ramp controllers	UI: Flight Strip Surface Modeling	4.2	ATDI-4270 - Disable auto move-to-gate if the flight is on hold or assigned to hardstand CLOSED	D
	The RTC indicates to the Ramp Managers/RMTC when there is a proposed Strategic Metering Program/SMP.	UI: Toolbar RTC Interface with SMP	4.0 4.3	ATDI-4134 - RMTC/STBO client show when there is a proposed SMP CLOSED	D, T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
				ATDI-4585 - Remove Gear Icon from RTC CLOSED	
	The RTC provides notification when there is a status update to SMP.	UI: Notification table RTC Interface with SMP	4.0	ATDI-4196 - Add notifications for SMP updates CLOSED	I
	The RTC provides a timer alert for a departure flight to meet its TMAT during metering when the flight is repositioned into the hardstand areas by the Ramp controllers.	UI: Map RTC Interface with SMP, Surface Modeling	4.0	ATDI-2927 - RTC: Add hardstand timers for untracked aircraft CLOSED	D
	The RTC provides a timer alert for a departure flight to meet its TMAT during metering when the flight's tracking location is detected to be within the hardstand areas.	UI: Map RTC Interface with SMP, Surface Modeling	4.0	ATDI-2927 - RTC: Add hardstand timers for untracked aircraft CLOSED	D
	The RTC updates its display of an arrival flight with no next flight in line of flight to an aircraft with no associated flight N minutes after the flight has arrived at its parking gate. (N = 10)	UI: Map Aircraft management	4.0 4.2	ATDI-3236 - RTC - Add ability to create aircraft icons CLOSED ATDI-4426 - RTC: Expired Arrival w/o next flight in LOF does not turn into a grey diamond CLOSED	D
	The RTC updates its display of an aircraft to a flight when it has a flight associated with it.	UI: Map Aircraft management, Flight management	4.0	ATDI-3236 - RTC - Add ability to create aircraft icons CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The RTC provides ramp controllers the ability to create an aircraft having no current flight associated with it.	UI: Map Aircraft management	4.0	ATDI-3236 - RTC - Add ability to create aircraft icons CLOSED	D
	The RTC provides ramp controllers the ability to remove an existing aircraft having no current flight associated with it for the following reasons: 1. the aircraft displayed in the system does not exist at the airport in reality	UI: Map Aircraft management	4.1	ATDI-4303 - RTC: Aircraft fixes continued CLOSED	D
	Disable the ability to hide an aircraft in the RTC	UI: Map Aircraft management	4.1 4.2	ATDI-4303 - RTC: Aircraft fixes continued CLOSED ATDI-4583 - RTC: Remove ability to hide aircraft CLOSED	D
	The RTC provides ramp controllers the ability to reposition an existing aircraft having no current flight associated with it	UI: Map Aircraft management	4.1	ATDI-4303 - RTC: Aircraft fixes continued CLOSED	D
	The RTC allows for the capability to set the default gate conflict threshold to display potential gate conflicts (for DFW: = 0 OR as soon as an arrival lands; for CLT: 10 min before an arrival lands).	UI: Map RTC Interface with STBO	4.3	ATDI-4719 - RTC: Set Gate Conflict threshold to 0 for DFW for all positions CLOSED	D
	The RTC indicates to the ramp controllers potential gate conflicts between an arrival flight and an aircraft parked at gate.	UI: Map RTC Interface with STBO	4.1	ATDI-4410 - Gate conflict updates to account for aircraft management CLOSED ATDI-4419 - RTC: Display gate conflict caused by neighboring aircraft CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The RTC indicates potential gate conflicts between a heavy aircraft and a flight or another aircraft assigned to a gate adjacent to its gate.	UI: Map RTC Interface with STBO	5.0	ATDI-5108 - DFW Gate updates CLOSED	D
	The RTC displays tethering between gates and their assigned flights within or outside of current display.	UI: Map Gate Management	4.5	ATDI-5126 - RTC gate tether doesn't work for flights not in viewable area CLOSED	D
	The RTC allows RTC users to modify, save, and retrieve saved profile settings.	UI: Map RTC User settings & preferences	4.1	ATDI-4269 - RTC: New default view for user profile separate from the preset buttons CLOSED	D
	The RTC allows the Ramp Managers to update parking gate status: 1. Close gates 2. Reopen gates	UI: Map Gate management	4.2	ATDI-4219 - RTC: Mark gates as closed CLOSED	D
	The RTC provides notification when a gate status is updated	UI: Notification panel Gate Management	4.3	ATDI-4472 - Add notification when a gate is closed / reopened CLOSED	I
	The RTC displays a ping upon any matching target on its current display in response to the user's search input for: flight, tail, destination airport, arrival/departure fix.	UI: Map Search service	4.2	ATDI-4528 - RTC: Refinements to search function CLOSED	D
	The RTC provides snap-to-airborne-arrival response only after the user indicates completion of search input for an airborne arrival flight.	UI: Map Search service	4.2	ATDI-4528 - RTC: Refinements to search function CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The RTC provides a dialog response only after the user indicates completion of search input for a departure or landed-arrival flight not on current display.	UI: Map Search service	4.2	ATDI-4528 - RTC: Refinements to search function CLOSED	D
	The RTC displays a list of arrival flights: 1. Callsign 2. Gate 3. Arrival Runways 4. Est. ON time	UI: Map	4.3	ATDI-4616 - Add runway column to Arrival Count list on RTC CLOSED	I
CLT	The RTC displays a list of flights affected by surface metering by: 1. Callsign 2. Gate 3. SOBT 4. EOBT 5. TOBT 6. Hold	UI: Map	4.8 5.5 5.8	ATDI-5608 - Add a metered flight list to RMTC similar to arrival and departure lists CLOSED ATDI-5811 - Add ability to RTC meter list by SOBT, EOBT, TOBT, or Hold CLOSED ATDI-6167 - Modify RTC flight list refresh rate CLOSED	D
DFW	The RTC allows users the capability to filter Departures and Arrivals display by ramp towers in its Arrival and Departures Summary display.	UI: Map	4.2	ATDI-4214 - DFW-RTC: Filtering Arrival and Departure lists on RTC CLOSED	D
CLT	The RTC allows ramp controllers to update a departure flight's runway due to operational necessity	UI: Map	4.3	ATDI-5041 - RTC: DFW should not be allowed to change runways CLOSED ATDI-4782 - opNec marking should be removed for DFW CLOSED	D, I

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The RTC allows users the capability to display sector frequencies for each ramp areas on the airport surface	UI: Map	4.3	ATDI-4201 - Add DFW frequencies on RTC map CLOSED	I
	The RTC allows users to put an aircraft in the Air Start state after pushback.	UI: Map	4.3	ATDI-4589 - RTC: Air start option after pushback CLOSED	D
	The RTC sets a flight with priority status using the following criteria: 1. Ramp controller manually sets a flight to be priority flight - highest precedence 2. Heavy flight or B75X at the terminal area (as opposed to cargo area)	UI: Map	4.3 4.6 5.1	ATDI-4672 - Set Priority on "Flagship" flights CLOSED ATDI-5261 - Reevaluate priority flag when flight data is updated CLOSED	D, I
CLT	The RTC hides the following flight information from non-FAA users: 1. Sensitive flights 2. Block at industry	UI: Map RTC Interface with STBO	4.2.3 4.7 5.2.2	ATDI-4806 - Setup sensitive data filtering on all systems CLOSED ATDI-4864 - Add CLT rungui.RampManager CLOSED ATDI-5616 - Fuser prevents block at industry flag from being set on existing flights CLOSED	D
	The RTC allows users to refresh its connection to the STBO.	UI: Map RTC Interface with STBO	4.3	ATDI-4217 - RTC Refresh option CLOSED	D
	The RTC sets the default metering hold advisory to FALSE.	UI: Map RTC Interface with SMP	4.3	ATDI-4675 - Modify default metering hold advisory to be false instead of pending CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
DFW	The RTC allows for the option to display TOBT ~~and/~~or TMAT advisories while a SMP is active.	UI: Map RTC Interface with SMP	4.3 4.5 4.7 5.3	ATDI-4614 - Add TMAT advisory to RTC CLOSED ATDI-4905 - TMAT advisory refinement CLOSED ATDI-5128 - Remove combined TOBT+TMAT advisory CLOSED	D, I
CLT	The RTC allows for the option to display advisories for surface metering candidates based on user-specified difference between TOBT and UOBT.	UI: Map RTC Interface w/ SMP	4.6	ATDI-5371 - Highlight flights on RTC that are candidates for leveraging surface metering CLOSED	D
	The RTC allows for the option to toggle advisory display between: 1. Uncertain flights (#hashtag); Planning flights with frozen/unfrozen advisories (frozen advisories in black text with cyan/green highlighted background) 2. Uncertain flight AND Planning flights with frozen/unfrozen advisories	UI: Map RTC Interface w/ SMP	4.4	ATDI-4985 - Option to replace hashtag with unfrozen/frozen advisory CLOSED	I, T
	The RTC only displays frozen advisories for an uncertain flight moved to READY state when the chosen advisory display option is #1: 1. Uncertain flights (#hashtag); Planning flights with frozen/unfrozen advisories (frozen advisories in black text with cyan/green highlighted background)	UI: Map RTC Interface w/ SMP	4.4	ATDI-4985 - Option to replace hashtag with unfrozen/frozen advisory CLOSED	I, T
	The RTC allows the ramp controllers to update a flight's spot assignment when the flight has not yet reached the spot location.	UI: Map Surface Modeling	4.4	ATDI-4970 - Improve User Spot Assignment Entries on RTC CLOSED	D

3 STBO User Interface & Capabilities

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The STBO allows ATC controllers to update emergency status for a flight: 1. Mechanical Emergency 2. Medical Emergency	UI: Timeline, Map, Table Flight Management	4.0	ATDI-4239 - HF refinements to Medical and Emergency CLOSED ATDI-3630 - Flag Emergency Flight via right mouse menu CLOSED	D
	The STBO indicates super weight class aircraft category for each applicable flight.	UI: Toolbar, Map Aircraft Management	4.0	ATDI-4181 - Add indication for Super weight class category CLOSED	T
	The STBO implements FAA and RECAT aircraft types.	Aircraft Management	4.0 4.4 5.0	ATDI-3790 - Update adaptation library to read aircraft types file with two weight class definitions CLOSED ATDI-5171 - update STBO properties to run DFW/DAL with RECAT CLOSED ATDI-5158 - Add DFW recat separation tables CLOSED ATDI-5147 - update DFW/DAL separations to handle recat wake turbulence values CLOSED	D, I
	The STBO implements IATA and ICAO aircraft types	Aircraft Management	5.1	ATDI-5028 - Update aircraft_types from lists of IATA codes CLOSED	I
DFW, CLT	The STBO implements Arrival Departure Window (ADW) separation.	Surface Modeling	4.4	ATDI-5159 - Add DFW ADW window separations CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
DFW, CLT	The STBO displays Arrival Departure Window (ADW)	UI: Map Surface Modeling	5.1	ATDI-5286 - DFW - Adapt ADW CLOSED	D
	The STBO provides GA flight categorization capability.	Flight Management	4.1 4.2 5.7	ATDI-4416 - DFW - Set GA attribute in gates file CLOSED ATDI-4245 - Search for GA not capturing all GAs CLOSED ATDI-6020 - Add filter for GA arrivals/departures in STBO search CLOSED	I, T, D
DFW	The STBO displays ramp holding pads.	UI: Map	4.3	ATDI-4557 - DFW - adapt hold pads CLOSED	D
CLT	The STBO allows for flight pre-scheduling capability. Flights eligible for pre-scheduling meet the following criteria: 1. The flight is a departure 2. The flight is arriving into airports available for pre-scheduling (i.e. ATL) 3. The flight is not considered a GA flight 4. The flight has a flight state greater than or equal to SCHEDULED and less than OFF 5. The flight is constrained by an APREQ TMI 6. The flight is not subjected to a Ground Stop 7. The flight can be negotiated electronically 8. The flight does not have a scheduled release time	UI: Timeline, map, table APREQ Management	4.0 4.3 4.5 5.4 5.8	ATDI-4176 - Setup apreq pre-schedule filters in AMS CLOSED ATDI-4590 - Prevent release prescheduling for ground stop flights CLOSED ATDI-4890 - Add ORD to apreq pre-scheduling CLOSED ATDI-5751 - Enabled apreq pre-scheduling for EWR and LGA CLOSED ATDI-6177 - Reduce ORD prescheduling to 10 minutes CLOSED	D, I

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	9. The flight is not in the middle of release negotiation 10. The flight has either an EOBT or UOBT a. If the flight has an EOBT then that time is within N minutes of the current time b. If the flight does not have an EOBT then the UOBT is within N minutes of the current time				
	The STBO indicates the source who updates TMI information: 1. User 2. TFM 3. OIS	UI: Toolbar TMI management	4.1	ATDI-4335 - Client: Source did not change to User when editing an OIS sourced APREQ schedule CLOSED	D
	The STBO allows the ATCT TMC to modify multiple TMIs with respect to the following capabilities: 1. Remove multiple TMIs at once 2. View constraints for multiple TMIs at once	UI: Toolbar TMI Management	4.1	ATDI-4267 - Client: Capability to remove multiple TMI restrictions simultaneously CLOSED	D
	The STBO allows ATC users to set "Airport" as a constraint when entering TMIs.	UI: Toolbar TMI Management	5.2	ATDI-5473 - STBO - TM Actions - Add "Airport" constraint CLOSED	D
	The STBO indicates when there is a proposed Strategic Metering Program/SMP.	UI: Toolbar STBO interface with SMP	4.0	ATDI-4134 - RMTC/STBO client show when there is a proposed SMP CLOSED	T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The STBO provides notification when there is a status update to SMP.	UI: Notification table STBO interface with SMP	4.0	ATDI-4196 - Add notifications for SMP updates CLOSED	I
	The STBO detects runway configuration change when traffic flow diverts by N degrees in the opposite direction (N >= 120 deg).	Surface Modeling	4.3	ATDI-5016 - Reduce opposite direction ops angle used in auto-detect config logic CLOSED	I
	The STBO computes actual runway heading using the first and last tracked position.	Surface Modeling	4.8	ATDI-5704 - Incorrect heading from external source results incorrect actual runway CLOSED	D
	The STBO alerts the ATCT TMC of automatic runway configuration changes.	UI: Notification dialog STBO interface with Surface Modeling	4.0 4.3	ATDI-4006 - Client: Display notification dialog if the runway configuration changes automatically CLOSED ATDI-4703 - Disable auto config change dialog for DFW CLOSED-	I
CLT	The STBO allows the ATCT TMC to accept or modify automatic runway configuration changes.	UI: Notification dialog Surface Modeling	4.0 4.1 4.3	ATDI-4006 - Client: Display notification dialog if the runway configuration changes automatically CLOSED ATDI-4406 - Client: Don't show config change dialog in Observer mode CLOSED ATDI-4703 - Disable auto config change dialog for DFW CLOSED-	I, T
	The STBO allows the ATC users to save customized STBO component setting independently from their customized STBO setting (aka user profile):	UI: Flight Table, Timeline	4.0 4.8	ATDI-2686 - Client: Save a flight table or timeline config independent of scf CLOSED	D, I

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	1. STBO Flight Table 2. STBO Timeline	User settings & preferences	5.4	ATDI-5722 - Import user preference files to release 4.8.0 CLOSED ATDI-5723 - Import user preference files to release 5.4.0 for DFW CLOSED	
	The STBO computes new trajectories for individual departure flights affected by closed taxiways.	UI: map Surface Modeling	4.0	ATDI-1188 - When a taxiway is closed, find another trajectory for a flight CLOSED	D
	The STBO allows ATC controllers to modify open/close status for the following airport surface areas: 1. the ramp area 2. the taxiways 3. the runways	UI: map Surface Modeling, TMI Service	4.0 5.7	ATDI-3841 - Client: Re-enable the ability to close/open taxiways CLOSED ATDI-6019 - Change STBO Map background color when modifying taxiway closures CLOSED	D
	The ATD-2 allows users to preset daily-scheduled restrictions: 1. Airport surface open/close status 2. TMI capabilities available on ATD-2	UI: command console TMI Service	4.0	ATDI-4024 - Persist link/taxiway/runway closures CLOSED	D, I
	The STBO displays range ring values in 4 cardinal directions: North, East, South, and West.	UI: Map Surface Modeling	4.1	ATDI-4268 - Client: Show range ring distance labels at all 4 cardinal directions CLOSED	D
	The STBO displays to the ATC users the departure fix or the departure procedure, mutually exclusive of each other.	UI: Map, Surface Modeling	4.1 5.0	ATDI-4203 - Overlapping Fix and Procedures on STBO Client Map CLOSED ATDI-4727 - Track the procedure associated with a fix CLOSED	D, T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The STBO determines potential gate conflicts between a flight and an aircraft parked at gate.	Gate conflict management	4.1	ATDI-4410 - Gate conflict updates to account for aircraft management CLOSED	D
	The STBO indicates to the ATC users potential gate conflicts between a flight and an aircraft parked at gate.	UI: Map, Flight Table	4.1	ATDI-4410 - Gate conflict updates to account for aircraft management CLOSED	D
	The STBO determines potential gate conflicts between a heavy aircraft and a flight or another aircraft assigned to a gate adjacent to its gate.	UI: Map, Flight Table Gate conflict management	5.0	ATDI-5108 - DFW Gate updates CLOSED	D
	The STBO allows for the capability to configure pushback time buffer for gate conflict detection for flights that have entered pushback state.	Gate conflict management	4.3 4.4	ATDI-4983 - Do not count flights in pushback status as gate conflicts for DFW CLOSED ATDI-5049 - Gate conflicts not flagged for late departures CLOSED	D, I
	The STBO allows for the capability to configure gate conflict detection tolerance buffer in order to improve gate conflict detection jittering.	Gate conflict management	4.4	ATDI-4984 - Add tolerance buffers to Gate Conflict detection CLOSED	I
	The STBO displays long-on-board information for flights.	UI: Timeline	4.3	ATDI-4726 - Add long-on-board icon to STBO Client timeline CLOSED	I
	The STBO provides the flight plan demand to the ATC users over a user-defined period of time.	UI: Timeline Flight plan demand service	4.1 5.4	ATDI-4347 - Flight Plan Demand UI Improvements CLOSED ATDI-5612 - Ability to set a rolling window of time for the Flight Plan counts CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The STBO allows the ATC users to preview and modify flight plan demand.	UI: Timeline Flight plan demand service	4.3	ATDI-4572 - Client: Flight plan demand - add Preview option CLOSED	D
	The STBO cancels stale search inputs from users after N seconds of the search being stale.	UI: Toolbar, Flight table, Timeline, Search Service	4.1	ATDI-4253 - Client: Redesign search timeout and cancellation CLOSED	D
	The STBO notifies the ATC users of Ground Delay Programs.	UI: Notification Panel TMI service	4.1	ATDI-4133 - Display GDP's in restriction list CLOSED	T, I
CLT	The STBO hides the following flight information from non-FAA users: 1. Sensitive flights 2. Block at Industry	UI: Map, Timeline, Table Flight Data Processing Service	4.2.3 4.7 5.2.2	ATDI-4806 - Setup sensitive data filtering on all systems CLOSED ATDI-5616 - Fuser prevents block at industry flag from being set on existing flights CLOSED	D
	The STBO provides the capability to display departure flights' current delay at the runway.	UI: Timeline	4.4	ATDI-5167 - Add truncated current-delay to the operational STBO's timeline configuration CLOSED	D
	The STBO disables the option for ATC users to set APREQ release time if the flight is under the following conditions: 1. Ground stop 2. OR Flight state = cancelled or suspended 3. OR Flights have no target off time	UI: Toolbar, Timeline, Flight Table	4.4	ATDI-5063 - Client improper validation of release times when flight is in ground stop CLOSED	D
	The STBO includes the option to display TRACON maps.	UI: Map Surface Modeling	4.6	ATDI-5304 - 06/07/19 Updates for CLT TRACON video maps CLOSED	D

4 Surface Scheduling & Metering User Interface & Capabilities

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The Surface SM Subsystem provides the option to set default values for SMP parameters: 1. SMP Status (Active/Inactive) 2. Upper Threshold (minutes) 3. Target (minutes) 4. Lower Threshold (minutes) 5. Lead time (minutes) 6. Static Time Horizon (N minutes) (Currently default value: N = 15 minutes for CLT, N = 0 minutes for DFW) 7. Auto-affirm Proposed SMP (True/False)	UI: SMD SMP	4.3 4.6 5.1	ATDI-4729 - Add default metering parameters for DFW CLOSED ATDI-5053 - Update default static time horizon for CLT CLOSED ATDI-5379 - Change default Static Time Horizon to 15 minutes CLOSED	D, I
	The Surface SM Subsystem allows the ATCT TMC to reject or accept a proposed SMP.	UI: SMD SMP	4.0	ATDI-4134 - RMTC/STBO client show when there is a proposed SMP CLOSED	T
	The Surface SM Subsystem provides the option to auto-affirm proposed SMPs.	SMP	4.2	ATDI-4517 - Add option to auto-affirm an SMP CLOSED	D
	The Surface SM Subsystem allows the ATCT TMC to reject auto-affirmed SMPs.	UI: SMD SMP	4.2	ATDI-4588 - Turn on Auto-Affirmation of SMPs CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The Surface SM Subsystem sets the status of an active SMP to REJECTED when the SMP is rejected N+ minutes before the end of the SMP.	UI: SMD SMP	4.2	ATDI-4449 - Make active SMP completed upon user rejection CLOSED	D
	The Surface SM Subsystem sets the status of an active SMP to COMPLETED when the SMP is rejected N minutes before the end of the SMP.	UI: SMD SMP	4.2	ATDI-4449 - Make active SMP completed upon user rejection CLOSED	D
	The Surface SM Subsystem allows the ATCT TMC to update Static Time Horizon when SMP is active.	UI: SMD SMP	4.0	ATDI-3897 - Allow user to set Static Time Horizon in SMD CLOSED ATDI-3895 - Add Static Time Horizon to ScheduledMeteringMode object CLOSED	I, T
	The Surface SM Subsystem allows for the option to freeze SMP start times once the start times are within the static time horizon.	Tactical Scheduling Service	4.7 5.3 5.4	ATDI-5546 - Freeze SMP start time CLOSED ATDI-5826 - Make SMP start time freeze the default CLOSED	D
	The Surface SM Subsystem uses flights in the PLANNING group to predict SMP.	Tactical Scheduling Service	4.1	ATDI-4334 - Exclude UNCERTAIN flights from triggering proposed SMP CLOSED	D
	The Surface SM Subsystem subjects all departure flights to SMP, except the following flight categories: 1. Cargo flights 2. Military flights	SMP	4.1	ATDI-4376 - Remove automatic exemption of international flights CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	3. Exempt from metering				
	The Surface SM Subsystem uses a Ration-By-Schedule/RBS algorithm while time-based metering is ON and SMP is ACTIVE AND AFFIRMED, which has an order of consideration by STOT, to schedule all departure flights in the PLANNING group, except the following: 1. Controlled flights (APREQ | EDCT) with CTOT 2. Frozen flights	Tactical Scheduling Service	4.2 4.3 4.4 5.0	ATDI-4512 - Options to set if pre-dmp queue full OOC class should use STOT for general flights. CLOSED ATDI-4372 - Tactical Scheduler Handle Case when Metering is ON and Queue is full CLOSED ATDI-4383 - Create a basic delay propagation for SurfaceSlotNetwork CLOSED ATDI-4287 - SurfaceSlotNetwork implement post DMP processing CLOSED ATDI-4607 - Tactical scheduler adaptation needed for DFW slot network algorithm CLOSED ATDI-4826 - TerminalSlotNetwork - Modify infrastructure for terminal slot network CLOSED ATDI-4840 - Order schedule priority type by priority for sorting CLOSED ATDI-5027 - Moving DFW Tactical Scheduler from Slot network to Strategic network for 4.4 and 5.0 CLOSED ATDI-5212 - Turn on the RBS schedule order for CLT in 4.4 CLOSED	A, D, I T
	The Surface SM Subsystem uses a FCFS scheduling algorithm while time-based metering is ON and SMP	Tactical Scheduling Service	4.0 4.2	ATDI-4188 - Schedule ramp and ama taxi in same group CLOSED	D, I, A

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	is ACTIVE AND AFFIRMED to schedule the following departure flights: 1. Controlled Flights (APREQ | EDCT) with CTOT (by CTOT - buffer; plus up to 2 minutes earlier for APREQ flights) 2. Frozen flights (by the previous iteration of TOBT+transit time to runway) 3. Exempt flights (by UTOT) 4. Active flights (by UTOT; buffer to the trajectory added to derive UTOT for ramp taxi flights) 5. Uncertain flights (by UTOT + buffer) 6. GA uncertain flights (by UTOT + buffer)		4.2.3 4.3 4.8 5.0 5.4	ATDI-4468 - SurfaceSlotNetwork handle delay distribution CLOSED ATDI-4381 - APREQ and EDCT flights should always be sorted by UTOT' for post DMP schedule CLOSED ATDI-4372 - Tactical Scheduler Handle Case when Metering is ON and Queue is full CLOSED ATDI-4329 - Correct order of consideration grouping and sort time for SurfaceSlotNetwork CLOSED ATDI-4388 - Add processing for TMI flights in SurfaceSlotNetwork CLOSED ATDI-4383 - Create a basic delay propagation for SurfaceSlotNetwork CLOSED ATDI-4385 - Order of Consideration classes handle Uncertain and GA flights CLOSED ATDI-4486 - Order of Consideration Handles Pushback Uncertain Flights CLOSED ATDI-4287 - SurfaceSlotNetwork implement post DMP processing CLOSED ATDI-4641 - Freeze Logic - Update freeze logic to use ETA message freeze data CLOSED	

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
				ATDI-4873 - Taxi Departure Slot Algorithm - Strategic Slot Network class to handle taxi departure flights CLOSED ATDI-5692 - Allow controlled flight to compete for TTOT slot earlier than it's controlled time CLOSED	
	The Surface SM Subsystem adjusts a departure flight's UTOT based on its grouping status: 1. Uncertain: UTOT = UTOT + 5 minutes 2. APREQ: UTOT = UTOT + 1 to 4 minutes	Tactical Scheduling Service	4.5 5.0	ATDI-5175 - Use ETA_AJUSTED time as sortTime for tactical scheduler's 1st and 2nd passes CLOSED	I
	The Surface SM Subsystem freezes departure flights when: 1. Call-ready (for APREQ | EDCT flights: only when they have A-time or E-time); 2. Manual freeze; 3. SMP static horizon freeze applies (N minutes to TOBT: freezes updates to the TOBT and TMAT at current time plus N minutes) except for UNCERTAIN flights	Tactical Scheduling Service	4.2.1 4.3	ATDI-4654 - Apreq flight without a CTOT should not be frozen CLOSED ATDI-4989 - Unfreeze all uncertain flight except for manually frozen flights (also controlled frozen) CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The Surface SM Subsystem only freezes UNCERTAIN flights when: 1. Call-Ready 2. Manually frozen and unfreezes these flights if they return to the UNCERTAIN state.	Tactical Scheduling Service	4.3	ATDI-4989 - Unfreeze all uncertain flight except for manually frozen flights (also controlled frozen) CLOSED	D
	The Surface SM Subsystem allows for the option to toggle between: 1. Freezing calculation of TOBT and TMAT when conditions are met (freezing with the previous schedule), 2. OR performing one additional update of TOBT and TMAT after conditions are met (freezing with an additional schedule iteration).	Tactical Scheduling Service	4.3	ATDI-4988 - Add toggle for previous schedule freeze logic CLOSED ATDI-4921 - Update freeze logic to add cases to freeze using previous existing metering times CLOSED	D
	The Surface SM Subsystem applies best out time used in freeze logic only if it uses freezing calculation of TOBT and TMAT with previous schedule iteration.	Tactical Scheduling Service	4.3	ATDI-5022 - Enable best out times when freezing previous schedule CLOSED	D
	The Surface SM Subsystem exempts from metering the following departure flights: 1. APREQ flights without CTOT (configurable)	Tactical Scheduling Service	4.2.3 4.4	ATDI-4673 - Options to allow Apreq flights without CTOT to be treated as exempt flights CLOSED ATDI-5014 - Tactical Scheduler Handle Emergency Flight as Exempt Flights CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	2. Emergency flights				
	The Surface SM Subsystem considers the following flights of equal priority for a slot in the runway: 1. Taxi flights with or without CTOT 2. Frozen and Exempt flights	Tactical Scheduling Service	4.3	ATDI-4974 - StrategicSlotNetwork - All Taxi Flights, Frozen Flights, and Exempt Flights should have same priority to compete for a slot CLOSED	D
	The Surface SM Subsystem prioritizes a departure flight's TCOT over every other category of departure flights.	Tactical Scheduling Service	4.4 5.0	ATDI-5163 - Terminal Slot Network scheduler prioritize TCOT flights over every non-arrival flights CLOSED ATDI-5029 - Make tactical scheduler adhere to TCOT CLOSED	I
DFW	The Surface SM Subsystem prioritizes taxi flights over gate flights.	Tactical Scheduling Service	4.4 4.5 5.1	ATDI-5139 - Strategic Slot Network comparators adds in delay buffers for gate flights CLOSED ATDI-5302 - Scheduling taxi flight first before the none active flights when both exist in the queue full eligible list CLOSED	D, I, A
	The Surface SM Subsystem allows priority flights to swap with other flights subjected to the same SMP.	Tactical Scheduling Service	4.3	ATDI-4739 - Move priority processing after DMP processing in SurfaceSlotNetwork CLOSED	D
	The Surface SM Subsystem allows frozen flights to swap with other priority flights.	Tactical Scheduling Service	4.7 5.3	ATDI-5542 - Correct priority algorithm to allow frozen priority and swaps CLOSED	D, T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The Surface SM Subsystem uses a FCFS scheduling algorithm while time-based metering is OFF or SMP is INACTIVE OR REJECTED, which has an order of consideration by UTOT, in order to: 1. Enable queue size awareness 2. Advise pushback time for controlled flight	Tactical Scheduling Service	4.2	ATDI-4157 - ATD-2 Upgrading the STBO's Scheduler to fully support ATD-2 phase-2 CLOSED ATDI-4385 - Order of Consideration classes handle Uncertain and GA flights CLOSED	D, A
	The Surface SM Subsystem allows for the option to reschedule when an uncertain flight is updated to ready state.	Tactical Scheduling Service	4.3	ATDI-4931 - Option to reschedule when user click on uncertain aircraft hashtag on RTC CLOSED	D, I
	The Surface SM Subsystem tracks runway usage from departed departure or landed arrival flights in its scheduling process.	Tactical Scheduling Service	4.2.3 5.4	ATDI-4783 - Incorporate runway usage from departed or landed flights into SurfaceSlotNetwork CLOSED ATDI-5803 - Runway usage not being set in refactored network CLOSED	D, I
	The Surface SM Subsystem sets the APREQ CTOT window to [-2 min, 1 min] within the APREQ Scheduled Release Time for a controlled flight.	Tactical Scheduling Service	4.2	ATDI-4436 - Set APREQ CTOT window to -2min +1min CLOSED	D, I
	The Surface SM Subsystem sets the EDCT CTOT window to [-5 min, 5 min] within the EDCT Scheduled Release Time for a controlled flight.	Tactical Scheduling Service	4.2	ATDI-4656 - EDCT Apreq flight without Apreq time should be treated as controlled flight in delay distribution service CLOSED	T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The Surface SM Subsystem ensures that flights constrained by APREQ TMI meet their APREQ times regardless of their EDCT status.	Tactical Scheduling Service	4.0	ATDI-4248 - TMAT and TOBT should not change from APREQ flight if EDCT value is added or modified CLOSED	T
	The Surface SM Subsystem sets default categorization of aircraft weight class to RECAT.	Tactical Scheduling Service	4.4	ATDI-5188 - Default gate weight class set to RECAT CLOSED	D

5 DASH User Interface & Capabilities

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The DASH indicates the airport from where the user submits their feedback.	UI: Feedback Page User Feedback Service	4.0	ATDI-4229 - Setup DFW Feedback Form CLOSED	D
	The DASH displays connection status between the ATD-2 and the AEFS	UI: DASH system monitor DASH interface with AEFS Integration Service	4.0	ATDI-4032 - DASH: Add status monitor for AEFS-ATD2 connection CLOSED	
	The DASH enables the following capabilities: 1. Quicklook funtionalities 2. Feedback functionalities	UI: Quicklook, Feedback page Quicklook, User Feedback Service	4.0	ATDI-4224 - DASH for DFW - QuickLook CLOSED	D
	The DASH displays active and past ramp closure status: 1. Start time 2. End time after ramp is reopened	UI: DASH quicklook DASH interface with RTC	4.1	ATDI-4352 - Add ramp closures to DASH CLOSED	D
	The DASH displays active and future Ground Delay Program status: 1. Destination 2. Start Time 3. End time 4. Average Delay 5. Max Delay	UI: DASH quicklook DASH interface with TMI service	4.1	ATDI-4133 - Display GDP's in restriction list CLOSED	T

6 Flight Data Ingestion, Processing, & Storage

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The ATD-2 system tracks multiple pre-departure flight plans for a flight.	Flight Data Processing Service	4.0	ATDI-4116 - Track multiple flight plans in FMC and Fuser CLOSED	D
	The ATD-2 system updates to the best current available flight plan in the event that a flight's flight plan is canceled.	Flight Data Processing Service	4.0	ATDI-4116 - Track multiple flight plans in FMC and Fuser CLOSED	D
	The ATD-2 system retrieves and processes Ground Delay Programs information from the TFMS SWIM feed: 1. Start Time 2. End Time 3. Affected US flights 4. Impacting Condition/Reason 5. Delay Assign To 6. Delay Average 7. Delay Limit 8. Max Delay	Flight Data Processing Service	4.1 5.0	ATDI-4311 - Parse GDP data from TFM CLOSED ATDI-4312 - Integrate GDP data into TMI Service CLOSED ATDI-5239 - Create TfmMitTransformFactory in TmiService CLOSED ATDI-5236 - Refactor TmiService to return a list of restrictions when transforming TFM data CLOSED	D, T, I
	The ATD-2 system stores Ground Delay Programs information retrieved and processed from the TFMS SWIM feed.	Flight Data Processing Service	4.1	ATDI-4311 - Parse GDP data from TFM CLOSED ATDI-4312 - Integrate GDP data into TMI Service CLOSED	T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The ATD-2 system archives TFM Flow data	Flight Data Processing Service	5.6	ATDI-5685 - Setup TFM Flow data warehouse archiving CLOSED	A
	The ATD-2 system processes cancelled APREQ time from the TBFM SWIM feed.	Flight Data Processing Service	4.2	ATDI-4165 - Handle canceled release times from TBFM SWIM CLOSED	I
	The ATD-2 system receives and processes sensitive flight information defined by FAA standards and regulations (aka SFD identification and protection process)	Flight Data Processing Service	4.3	ATDI-4885 - Add sensitive data detection logic to Fuser CLOSED	I
	The ATD-2 system hides the following flight information from non-FAA users: 1. Sensitive flights 2. Block at industry	Flight Data Processing Service	4.2.3 4.7	ATDI-4806 - Setup sensitive data filtering on all systems CLOSED ATDI-4864 - Add CLT rungui.RampManager CLOSED ATDI-5321 - Add BlockAtIndustry tracking to the Fuser CLOSED	D, I
	The ATD-2 system allows for the capability to modify non-FAA users' visibility to sensitive flights: 1. White list: flights categorized as sensitive but still visible to non-FAA users 2. Black list: flights categorized as sensitive and not visible to non-FAA users	Flight Data Processing Service	4.2.3	ATDI-4874 - Configurable whitelist and blacklist for sensitive data CLOSED	T

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	The ATD-2 system mediates multiple CID values assigned to flights by multiple ERAM facilities and provides one current CID per ARTCC for flights.	Flight Data Processing Service	4.3	ATDI-4897 - Fusion of multiple CIDs CLOSED	I
	The ATD-2 system determines whether a flight is at the arrival or destination airport and set its Operating Airport Value accordingly. The Operating Airport Value is used by: 1. Gate Conflict detection 2. Map Display logic	Flight Data Processing Service	4.3	ATDI-4613 - Define model updater to set the operating airport value CLOSED	I
	The ATD-2 system stores data for N days. (N = 3)	Flight Data Processing Service	4.6 5.4	ATDI-5347 - Fuser data capture dropping really old tables CLOSED ATDI-5750 - Only store 3 days of operational flight data CLOSED	I
	The ATD-2 system prioritizes data sources for Airline Parking Gate in the following order: 1. TFM_TFDM (highest precedence) 2. AIRLINE_FLIGHTHUB 3. AIRLINE_FLIGHTSTATUS	Flight Data Processing Service	4.8 5.4	ATDI-5434 - Switch Fuser mediation to prefer TFM over FlightHub CLOSED	T
	The ATD-2 system prioritizes data sources for Earliest Off Block Time in the following order: 1. TFM_TFDM (highest precedence) 2. AIRLINE	Flight Data Processing Service	4.8 5.4	ATDI-5434 - Switch Fuser mediation to prefer TFM over FlightHub CLOSED	T

7 TTP

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
DFW, DAL	The ATD-2 provides TTP services for airports that are ATD-2 participants		4.2 5.2	ATDI-4513 - Configure TTP for DFW CLOSED ATDI-5398 - Filter D10 small airports from TTP CLOSED	D, I
	The TTP publishes airport codes using ICAO airport codes.		4.1	ATDI-4242 - Use ICAO airport in TTP CLOSED	I
	The TTP publishes information for a flight only after it receives the flight's data from a SWIM source other than the Airline (aka Flight Hub).		4.1	ATDI-4323 - Filter TTP Flight Data to non FlightHub sources CLOSED	I
	The TTP routes CDM data to the appropriate CDM consumers and non-CDM data to the appropriate non-CDM consumers.		5.3	ATDI-5623 - Update TTP routing for CDM consumers CLOSED	
	The TTP removes CDM data fields from the TTP feed when sent to non-CDM participants: 1. ActualTakeOffTime 2. ActualLandingTime 3. ActualOffBlockTime 4. ActualInBlockTime 5. EarliestOffBlockTime 6. DepartureStandDesignator		4.7 5.2.1	ATDI-5301 - TTP CDM data filtering CLOSED	I

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	7. ArrivalStandDesignator 8. AircraftRegistrationMark				
	The TTP publishes SMP data feed.		4.7 5.3	ATDI-3962 - Develop TTP SMP Schema CLOSED	T
	The TTP publishes flight data feed.		5.6	ATDI-5956 - Produce ArrivalStandAvailability for TTP Flight Data CLOSED	D, I

8 AEFS Integration

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
CLT	The ATD-2 system monitors connection between the AEFS and ATD-2.	AEFS Integration Service	4.0	ATDI-4237 - Add Heartbeat to AefsProcessor to monitor AEFS connection CLOSED	D
CLT	The ATD-2 system sends updated times to the AEFS in units which match those of the AEFS.	AEFS Integration Service	4.0	ATDI-4191 - AefsFuserBridge should send times to AEFS only when different in the unit of minute and above CLOSED	I
CLT	The ATD-2 system sends ETD updates to the AEFS if the ETD message time difference is greater than N minutes (N = 2).	AEFS Integration Service	4.3	ATDI-4648 - AEFS message throttling CLOSED	D
CLT	The ATD-2 system provides indication for a flight having its flight strip removed by the AEFS.	AEFS Integration Service	4.0	ATDI-4166 - Store AEFS RS message into the database and reflect on Fuser CLOSED	D
CLT	The ATD-2 system gives the AEFS precedence over the ATD-2 with respect to changing a departure flight's runway due to Operational Necessity.	AEFS Integration Service	4.1	ATDI-4405 - AEFS unsets RTC user runway and OpNec CLOSED	T
CLT	The ATD-2 system determines if an arrival flight currently exists in AEFS and requests the AEFS to create an arrival flight strip in AEFS if: 1. it did not already exist 2. AND the arrival flight's state is ON_FINAL	AEFS Integration Service	4.3	ATDI-4915 - Create AefsExtension with CID when adding an arrival for the first time if it doesn't exist CLOSED ATDI-4514 - Send arrival updates to AEFS CLOSED	D

Airport	Functional Description	Functional Components	Release	Trace (JIRA)	Verification Methods
	3. AND the arrival flight is N nm distance from the runway.			ATDI-4339 - Add Aefs Arrival List Messaging CLOSED	
CLT	The ATD-2 system sends request to the AEFS to remove the arrival flight strip from the AEFS when it enters the ramp area/NMA.	AEFS Integration Service	4.3	ATDI-4514 - Send arrival updates to AEFS CLOSED ATDI-4339 - Add Aefs Arrival List Messaging CLOSED	D
CLT	The ATD-2 system uses the CID for a flight that matches that of AEFS.	AEFS Integration Service	4.3	ATDI-4899 - Need to send and use consistent CID when sending data to AEFS CLOSED	D
CLT	The ATD-2 system consistently uses only one CID for a flight when sending data to AEFS.	AEFS Integration Service	4.3	ATDI-4899 - Need to send and use consistent CID when sending data to AEFS CLOSED	D
CLT	The ATD-2 system customizes its identification of potential gate conflicts for the AEFS using: 1. departure flight's TOBT 2. departure flight's AOBT 3. arrival fight's UIBT	AEFS Integration Service	5.4 5.5	ATDI-5705 - Turn off AEFS gate conflict when departure pushes back CLOSED ATDI-5810 - AEFS conflict indicator refinement CLOSED	T

9 Data Definitions

Flight groupings by Tactical Scheduler	Definitions	Release	Trace (JIRA) ATDI-4157 - ATD-2 Upgrading the STBO's Scheduler to fully support ATD-2 phase-2 CLOSED
Uncertain Flights	1. Flights without EOBT 2. Flights late relative to its EOBT | LOBT (N = 8 minutes)		
Uncertain Flights - GA Uncertain Flights	Regular GA flights without AOBT GA flights subjected to EDCT GA flights subjected to APREQ without CTOT Flights are extremely uncertain, they only get the leftover TTOT slots within N minutes of their UTOT. (N = 30).	4.2	ATDI-4415 - OOC classes should treat GA uncertain flight with EDCT as GA uncertain CLOSED
Planning Flights - all	Flight is a departure not yet having AOBT AND pushback request is not yet received AND flight has EOBT OR (flight is non-GA AND flight has LOBT) AND EOBT | LOBT >= current time - N minutes (N = 8) AND EOBT | LOBT <= current time + N hrs (N = 8).	4.2	ATDI-4434 - Enable Model to evaluate flight as uncertain regardless of metering situation CLOSED
Planning Flights - Priority Flights	After preliminary TTOTs are generated for all departure flights, priority algorithm is applied for flights still at gates. Priority can only be applied when flight is an active SMP flight. Priority does not apply to an APREQ | EDCT flight with A-time | E-time. Priority flight is advanced to an earliest TTOT slot of the same airline that we can control it to.	4.2.1	ATDI-4637 - Priority flights should not be processed if flight has valid CTOT CLOSED
Planning Flights - Controlled Flights w/ CTOT	1. APREQ flights with CTOT 2. EDCT flights with CTOT	4.2	ATDI-4415 - OOC classes should treat GA uncertain flight with EDCT as GA uncertain CLOSED

Flight groupings by Tactical Scheduler	Definitions	Release	Trace (JIRA) ATDI-4157 - ATD-2 Upgrading the STBO's Scheduler to fully support ATD-2 phase-2 CLOSED
	3. GA flights subjected to APREQ with CTOT		
Planning Flights - Controlled Flights w/o CTOT	1. APREQ flights without CTOT 2. EDCT flights without CTOT		
Active Flights	Flights already pushed from gate (has AOBT; freeze to TMAT); flights moving on airport surface		

Tactical Scheduler	STBO Flight Table	IADS Test Tool FMC API Tab	Fuser Database
Time-Based Metering is ON AND flight is in an AFFIRMED | ACTIVE SMP			
Gate time	TOBT	Gate Time - Surface Metered	Departure_stand_surface_metered_time_value
Spot time	TMAT	Spot Time - Surface Metered	Departure_movement_area_surface_metered_time_value
Off time	TTOT	Off Time - Controlled	Departure_runway_target_time
Time-Based Metering is OFF			
Gate time	Gate Time	Gate Time - Controlled	Departure_stand_target_time
Spot time	Spot Time	Spot Time - Controlled	Departure_movement_area_target_time
Off time	TTOT	Off Time - Controlled	Departure_runway_target_time

OBTs	Definitions
EOBT (Earliest)	Provided by the airline. At least one airline does have an algorithm that uses LOBT as input along with a lot of other inputs to compute EOBT. Most other airlines are just copying LOBT into the EOBT field.
LOBT (airline)	aka L-Time. Most airlines use this to display the flight times on the screen at the airports. It normally is a human updating this. Prior to EOBT, LOBT was the best information on when the flight would pushback from the gate.
POBT (proposed)	aka P-Time to most people - This is the departure time that is in the filed flight plan. If the flight is on-time, POBT = SOBT. But it can be later if the flight is severely delayed. It is almost never updated once it is set. POBT is the time shown on the ATC flight strip by default.
SOBT (scheduled)	This is the time printed on your ticket and the time that you are looking at when you by an airline ticket. ATD-2 calls it "P-Time" on RTC, but that was due to some confusion. I don't know of anywhere else in the NAS that SOBT is called "P-Time"
IOBT (initial)	This is the first OBT known to the system. It never changes once set. If the flight is scheduled, IOBT = SOBT. But if the flight is unscheduled, like a GA flight, then the first time we will find out about the flight is when they file a flight plan. In that case, IOBT = POBT. There are a couple of other edge cases that can set IOBT to the LOBT, but those are rarer.
UOBT	UOBT is normally equal to the EOBT if the EOBT is set. If there is no EOBT, then LOBT; if no LOBT, then flight plan departure time (POBT); if no POBT, then SOBT; if no SOBT; then IOBT. If no IOBT; then it falls into some other logic that is almost never used. If UOBT is in the past after that calculation, then we hover UOBT at current time. We also hover UOBT if the flight has been put on hold because the flight could push back at any moment.
TOBT	Scheduler gate time output
AOBT (actual)	We get AOBTs from external sources, from RTC pushback clearances, and the model detecting pushback based on track data. On test systems, we use all three as possible sources. On the operational system at CLT, we only use the second two.