



STDDS R6P2 Release Notes

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2 System Description

The SWIM Terminal Data Distribution System (STDDS) provides Service Oriented Architecture (SOA) interfaces for tower and Terminal Radar Approach Control (TRACON) systems to send terminal events to the NAS Enterprise Message Service (NEMS) for subscription by NAS and non-NAS consumers using SWIM compliant infrastructure and interface standards.

The STDDS interfaces with the Runway Visual Range (RVR) system, Electronic Flight Strip Transfer System (EFSTS), Airport Surface Detection Equipment Model X (ASDE-X) system, Airport Surface Surveillance Capability (ASSC) system, and Tower Data Link Service (TDLS) system at airports to accept, derive and publish airport information.

The STDDS also interfaces with the Standard Terminal Automation Replacement System (STARS) General NAS User Services (GeNUS) interface at TRACONs and the SWIM Flight Data Publication Service (SFDPS) at ARTCCs.

Detailed information about the Release R6P2 STDDS services, including Java Message Service Design Documents (JMSDDs), schema, sample data and site data availability can be found in the NAS Service Registry Repository ([NSRR](#)).

3 Summary of Release R6P2 Changes

STDDS R6P2 includes the following changes:

- All Services:
 - In R6P2, the namespace will not increment
 - Add Limiting Aircraft Display Data (LADD) filtering
- TAIS:
 - Add rawFlightRules field to the TerminalAutomationFlightPlan message
 - Publish all associated tracks regardless of altitude
 - Publish STARS AIG210 in TAIS service
 - Reduce AIG200/210 message loss on STARS switchover by parsing dual inputs
- TDES:
 - Enhance TDES with additional TDLS messages
 - Publish additional TDLS data in TDES messages
 - Parse and publish entire dataHeader in DATISMessage
- SMES:
 - Enhance SMES with additional airport movement events
 - Add new optional fields to SMES events
 - Add *_COVAR fields to the MLAT and ADSB CAT10 messages
 - Remove legacy “v” attribute from asdexmessage.xsd
 - Enhance SMES CAT10 data using SFDPS data
 - Add ASDE-X/ASSC data published in Maintenance Mode to STDDS feed

- Add fields to the Position Report and Safety Logic Alert messages from the new ASSC ICD.
- ISMC:
 - Publish messages in MMIXM format
 - Split the STDDS Status message by content sensitivity

Not all R6P2 changes/enhancements are included in these release notes, only those deemed important to STDDS consumers.

4 Details of changes

4.1 Limiting Aircraft Data Displayed (LADD) Filtering

To address flight data privacy concerns primarily related to ADS-B Out transmissions containing ICAO aircraft addresses, the FAA has created the Limiting Aircraft Data Displayed (LADD) program (see <https://ladd.faa.gov>).

STDDS R6P2 will tag flight data for any aircraft identifiers found in the weekly updated “LADD FAA Source Filter” file so that they are not distributed outside of the FAA by NEMS.

Affected Services	Affected Message Types	Schema changes?	User changes required?
All	All	No	No

4.2 Message Header Namespace will not Change

Note, as in all post-R4 releases, the namespace in the message headers will not increment to reflect a version change.

For example, for SMES

urn:us:gov:dot:faa:atm:terminal:entities:v4-0:smes:surfacemovementevent
will remain unchanged for R6P2.

4.3 Add rawFlightRules field to the TAIS TerminalAutomationTrackAndFlightPlan message

STDDS R6P2 adds the raw format of the Flight Rules field, represented by a single letter, such as ‘V’ indicating VFR, ‘P’ indicating VFR on Top, ‘E’ indicating Enroute IFR or any other site adapted character (including blank).

Affected Services	Affected Message Types	Schema changes?	User changes required?

TAIS	TerminalAutomationTrackAndFlightPlanData (FP)	Yes	Yes, to consume new data
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4.4 Publish all associated TAIS tracks regardless of altitude

STDDS R6P2 publishes all TAIS tracks associated with a flight plan, regardless of altitude. Prior versions of STDDS only published TerminalAutomationTrackAndFlightPlan messages with a reported altitude below an adapted ceiling. This change will ensure that all associated tracks are published while reducing the number of published high-altitude unassociated tracks (and the bandwidth they require).

Affected Services	Affected Message Types	Schema changes?	User changes required?
TAIS	TerminalAutomationTrackAndFlightPlanData (FP)	No	No

4.5 Publish STARS AIG210 in TAIS Service

STDDS R6P2 parses the AIG210 message as well as the AIG200. Where the AIG210 message is available, STDDS will publish the latitude/longitude data directly from STARS. Where AIG210 is not available, STDDS will continue to calculate the latitude/longitude data using the Point of Tangency calculation. This change will be transparent to TAIS users.

STDDS TAIS will also publish the optional fields assigned altitude and equipment suffix where the AIG210 is available.

Affected Services	Affected Message Types	Schema changes?	User changes required?
TAIS	TerminalAutomationTrackAndFlightPlanData (FP)	No	Not to consume lat/lon data Yes to consume equipment suffix or assigned altitude.

4.6 Reduce AIG200/210 message loss on STARS switchover by parsing dual inputs

STDDS R6P2 will parse dual STARS input threads and monitor the STARS record sequence numbers on each, to reduce lost track and flight plan data. This change will be transparent to TAIS users.

Affected Services	Affected Message Types	Schema changes?	User changes required?
TAIS	TerminalAutomationTrackAndFlightPlanData (FP)	No	No

4.7 Enhance TDES with Additional TDLS Messages

STDDS R6P2 adds new TDLS messages:

- PDC Data Message (PreDeparture Clearance message)
- PDA Data Message (PreDeparture Clearance acknowledgment message)
- GRM Data Message (Gate ID Request Message from pilot)
- GIR Data Message (Response to Gate ID Request from pilot)
- CCI Data Message (Initial Dispatch Message with initial clearance data to pilot)
- CCR Data Message (Revised Dispatch Message with initial clearance data to pilot)
- CCA Data Message (Dispatch Message Acknowledgement from pilot)
- CCP Data Message (Pilot Response to Dispatch Message)

All these messages will be filtered for sensitivity and enhanced with SFDPS data if a match is found.

Affected Services	Affected Message Types	Schema changes?	User changes required?
TDES	PreDepartureClearance (PD) PreDepartureClearanceAck (PA) GateRequest (GR) GateRequestResponse (GQ) InitialDispatch (ID) RevisedDispatch (RD) DispachMsgAck (DA) PilotResponseDispatch (PD)	Yes	Yes, to consume new messages

4.8 Publish additional TDLS data in TDES messages

STDDS R6P2 will add beacon code, ECID and aircraft type from TDLS to all TDES messages except the D-ATIS message. This means that messages which are determined to be non-sensitive and contain a beacon code will be published to non-NAS users. SFDPS data enhancement for TDES messages will be limited to ERAM GUFU and SFDPS GUFU.

Affected Services	Affected Message Types	Schema changes?	User changes required?
TDES	All except the DATISMessage (DD)	No	No

4.9 Parse and publish entire dataHeader in DATISMessage

STDDS R6P2 will parse and publish the Data Type, ATIS code, and Data Generation Timestamp

found in the DATIS message header. R6P2 will continue publishing the dataHeader field containing raw D-ATIS data, for backwards compatibility.

Affected Services	Affected Message Types	Schema changes?	User changes required?
TDES	DATISMessage (DD)	Yes	Yes, to consume new data

4.10 Enhance SMES with Additional Airport Movement Events

STDDS R6P2 adds 2 new runway event types to the existing SurfaceMovementEvent message:

- Runwayin
- Runwayout

The associated runway ID will also be provided if available.

Affected Services	Affected Message Types	Schema changes?	User changes required?
SMES	SurfaceMovementEvent (SE)	Yes	Yes, to consume new data

4.11 Add New Optional Fields to SMES Event Messages

STDDS R6P2 adds the following optional fields to SMES event messages, where available: manualCallsign, manualMode3ACode, aircraftType, and manualAircraftType

Affected Services	Affected Message Types	Schema changes?	User changes required?
SMES	SurfaceMovementEvent (SE)	Yes	Yes, to consume new data

4.12 Add *_COVAR fields to the MLAT and ADSB CAT10 messages

STDDS R6P2 adds the XX_COVAR, YY_COVAR, ZZ_COVAR, XY_COVAR fields to the MLATPlotReport and ADSBPlotReport messages. These fields provide a precision measure for the X and Y coordinates of CAT10 data.

Affected Services	Affected Message Types	Schema changes?	User changes required?
SMES	MLATPlotReport (ML) ADSBPlotReport (AD)	Yes	Yes, to consume new data.

4.13 Enhance SMES CAT10 data using SFDPS data

STDDS R6P2 will expand SFDPS data enhancement to the ASDE-X/ASSC CAT10 data (MLAT and

ADSB messages).

The SFDPS data used to enhance each CAT10 message follows in the chart below. Note that not all SFDPS data elements may be available for each STDDS message.

Service	Message	ERAM GUFIs	SFDPS GUFIs	Dep Airport	Arr Airport	AC Type	Beacon Code
SMES	MLATPlotReport (ML)	✓	✓	✓	✓	✓	
SMES	ADSBPlotReport (AD)	✓	✓	✓	✓	✓	

The SFDPS and ERAM GUFIs will be included in all delta encoded messages to ease data correlation.

The fields derived from SFDPS can be marked as potentially stale due to interruption in the flow of flight plan data (either an interruption in the connection between STDDS and SFDPS or if an SFDPS ARTCC status is not “up”). Once STDDS receives a flight plan update, it ceases tagging the data as potentially stale.

Affected Services	Affected Message Types	Schema changes?	User changes required?
SMES	MLATPlotReport (ML) ADSBPlotReport (AD)	Yes	Yes, to consume new data.

4.14 Add ASDE-X/ASSC data published in Maintenance Mode to STDDS feed

STDDS R6P2 publishes SMES data when the producing ASDE-X/ASSC system is in maintenance mode. Prior versions of STDDS published data only when ASDE-X/ASSC systems were in operational mode. All SMES messages add the optional Maintenance Mode attribute to allow consumers to see the mode of the producing ASDE-X/ASSC system.

Affected Services	Affected Message Types	Schema changes?	User changes required?
SMES	All SMES Messages	Yes	Yes, to consume new maintenance mode indicator field.

4.15 Add fields to the Position Report and Safety Logic Alert messages from the new ASSC ICD

STDDS R6P2 adds the optional tf (set to one if the Taxiway Arrival Alert Filtered bit is set due to an MLAT critical fault) and twyID (predicted taxiway ID) fields to the Position Report message.

It also adds the optional ta (Taxiway alert location flag indicating whether the alert location is a taxiway or not) field to the SafetyLogicAlertReport to indicate whether the alert is on a taxiway or not.

Affected Services	Affected Message Types	Schema changes?	User changes required?
SMES	Position Report (AT) SafetyLogicAlertReport (SA)	Yes	Yes, to consume new fields

4.16 Publish link status in MMIXM format

STDDS R6P2 will add a notification of a change in the link status for all of the STDDS application services (TAIS, SMES, TDES, and APDS) in Maintenance Management Information eXchange Model (MMIXM) format. A heartbeat message in MMIXM format will also be available for end users to determine connectivity. Both messages will be available for subscription by all STDDS consumers.

Affected Services	Affected Message Types	Schema changes?	User changes required?
ISMC	LinkStatusNotification (LS)	Yes	Yes, to consume new data.
ISMC	STDDSHearbeat (HB)	Yes	Yes, to consume new data.

4.17 Split STDDS Status message by content sensitivity

STDDS R6P2 will publish both a sensitive and non-sensitive version of the STDDSStatus message, based on the message contents.

The STDDSStatus message is a development/maintenance oriented message that uses a flexible data format, which includes software and adaptation versions, user-initiated configuration changes, software status, software uptime, system restarts, detailed link status and transaction rates, input and processing message loss, and notifications.

Affected Services	Affected Message Types	Schema changes?	User changes required?
ISMC	STDDSStatus (DS)	No	Yes, to consume new data.