



## **STDDS R6.0 Release Notes**

**May 12, 2020**

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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 R6.0 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 R6.0 Changes

STDDS R6.0 includes the following changes:

- **TAIS:**
  - Add rawFlightRules field to the TerminalAutomationFlightPlan message
  - Publish all associated tracks regardless of altitude
- **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 \*\_COVAR fields to the MLAT and ADSB CAT10 messages
  - Remove legacy “v” attribute from asdexmessage.xsd
  - Enhance SMES CAT10 data using SFDPS data
- **ISMC:**
  - Publish messages in MMIXM format
- **All Services:**
  - In R6, the namespace will not increment as it has in prior releases

Not all R6.0 changes/enhancements are included in these release notes, only those deemed important to STDDS consumers.

## 4 Details of changes

### 4.1 Add rawFlightRules field to the TAIS TerminalAutomationTrackAndFlightPlan message

STDDS R6 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

### 4.2 Publish all associated TAIS tracks regardless of altitude

STDDS R6 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

### 4.3 Enhance TDES with Additional TDLS Messages

STDDS R6 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) DispatchMsgAck (DA) PilotResponseDispatch (PD)	Yes	Yes, to consume new messages

#### 4.4 Publish additional TDLS data in TDES messages

STDDS R6 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 GUF1 and SFDPS GUF1.

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

#### 4.5 Parse and publish entire dataHeader in DATISMessage

STDDS R6 will parse and publish the Data Type, ATIS code, and Data Generation Timestamp found in the DATIS message header. R6 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

#### 4.6 Enhance SMES with Additional Airport Movement Events

STDDS R6 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

#### 4.7 Add \*\_COVAR fields to the MLAT and ADSB CAT10 messages

STDDS R6 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.

#### 4.8 Enhance SMES CAT10 data using SFDPS data

STDDS R6 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 all SFDPS data elements may not be available for each STDDS message.

Service	Message	ERAM GUFU	SFDPS GUFU	Dep Airport	Arr Airport	AC Type	Beacon Code
SMES	MLATPlotReport	✓	✓	✓	✓	✓	
SMES	ADSBPlotReport	✓	✓	✓	✓	✓	

The SFDPS and ERAM GUFUs 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.

#### 4.9 Publish link status in MMIXM format

STDDS R6 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	Yes	Yes, to consume new data.
ISMC	STDDSHearbeat	Yes	Yes, to consume new data.

#### 4.10 Message Header Namespace will not Change

Note, unlike in prior 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 R6. It will not increment to v6-0.