

Time Based Flow Management (TBFM)

Release 4.15.0
(R4.15/1.1.0)

Presented to: **SWIM Users Forum**
By: **Shakeela Bader, CTR, TBFM**
Alex Prikhodko, CTR, SWIM
Date: **November 15, 2022**



**Federal Aviation
Administration**

AGENDA

- **Current MIS Content - R4.3.2 (1.0.0)**
- **Updates to MIS in R4.15 (1.1.0)**
- **Schedule of R4.15 (1.1.0)**
- **Impacts to Current MIS NESG Consumers**
- **Impacts to Current MIS SCDS Consumers**
- **Testing with R4.15 (1.1.0)**
- **Next Steps**
- **Questions**

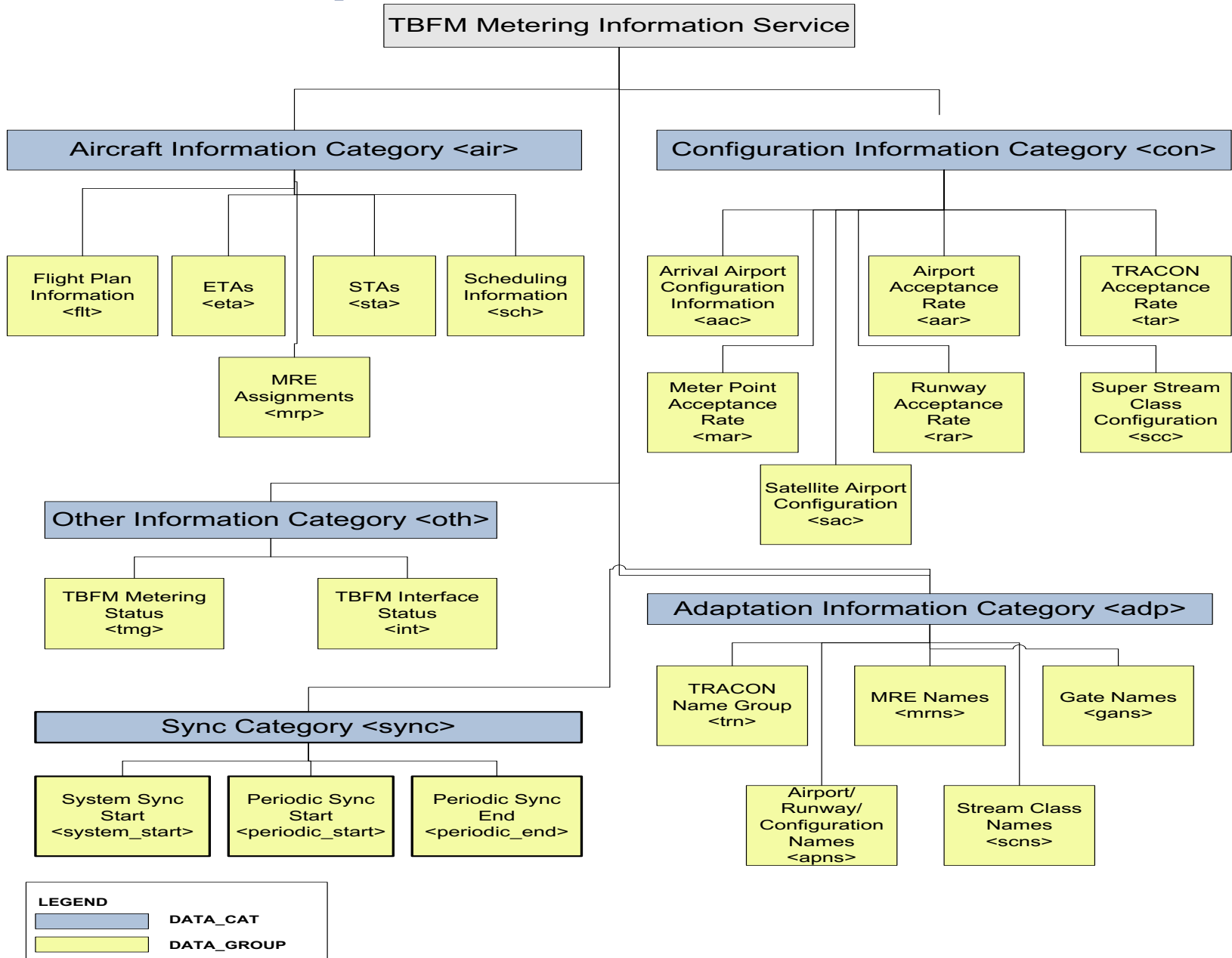
Current MIS Data Message Categories

- **Aircraft Information**
- **Configuration Information**
- **Adaptation Information**
- **Synchronization**
- **Status Group/ Other**

Current MIS Message Groups & Messages

Message Category	Message Group	Message
"air" (Aircraft Information)	<flt>	Flight Plan Information
	<trk>	Tracking Information
	<mrp>	Meter Reference Element (MRE) Assignments
	<eta>	Estimated Time of Arrival (ETA)s
	<sta>	Scheduled Time of Arrival (STA)s
	<sch>	Scheduling Information
"con" (Configuration Information)	<aac>	Arrival Airport Configuration Information
	<mar>	Meter Point Acceptance Rate
	<sac>	Satellite Airport Configuration
	<rar>	Runway Acceptance Rate
	<aar>	Airport Acceptance Rate
	<scc>	Super Stream Class Configuration
	<tar>	TRACON Acceptance Rate
	<gar>	Gate Acceptance Rate
"oth" (Other Information)	<int>	TBFM Interface Status Information Group
	<tmg>	TBFM Metering Status Information Group
"adp" (Adaptation Information)	<trn>	TRACON Name Group
	<gans>	Gate Names
	<apns>	Airport/Runway/Configuration Names
	<mrns>	MRE Names
	<scns>	Stream Class Names
"sync" (Synchronization)	<system_start>	System Sync Start
	<periodic_start>	Periodic Sync Start
	<periodic_end>	Periodic Sync End

Current Graphical View of MIS Data



Updates to MIS in R4.15 (1.1.0)

The following MIS enhancements were added to the JMSDD:

Update	Message Group	Nature of the Update	Message Type	Data Format/Range
Versioning		MIS JMS Header Update	All Message Types	N.N.N, where each N can range from 0-99
Departure Airport Information	<dap>	MIS JMS Header Update	Air Information (all); Configuration Information (subset of messages)	3-4 characters
Destination Airport Information	<apt>	MIS JMS Header Update	Air Information (all); Configuration Information (subset of messages)	3-4 characters
Computer ID (CID)	<cid>	New Aircraft Information Data	Aircraft Information Data	3 alphanumeric ASCII Character
GUFI (Global Unique Flight Indicator)	<gufi>	New Aircraft Information Data	Aircraft Information Data	10 character ASCII string with 10 characters: A-Z or 0-9
Heartbeat Message	<hb>	New Message for MIS Info	Heartbeat Data	Not Applicable
DEX_SOURCE_TYPE		Identifier used to group messages for a SWIM service utilizing the value of 'TBFM'		

Schedule for R4.15 (1.1.0)

- **TBFM R4.15 (1.1.0) *tentative* date for key site exit brief: 2/23**
- **TBFM R4.15 (1.1.0) *tentative* date for ZTL key site acceptance: 3/23**
 - **All TBFM systems will step up to R4.15 (1.1.0) within 180 days of ZTL key site acceptance**

Impacts to Current MIS NESG Consumers

- **Existing NAS Enterprise Security Gateway (NESG) Consumers of MIS R4.3.2 (1.0.0) will have their subscriptions updated to consume R4.15 (1.1.0) mediated to R4.3.2 (1.0.0)**
 - As such, impacts of TBFM migration to R4.15 (1.1.0) are mitigated for NESG Consumers
- **NESG Consumers may opt-out from having their SWIM subscriptions updated to consume R4.15 (1.1.0) to R4.3.2 (1.0.0) Mediation**
- **Mediation of R4.15 (1.1.0) to R4.3.2 (1.0.0) will not remain in place in perpetuity, and MIS Consumers should plan to migrate to the latest MIS release in the future**
 - A sunset date for R4.15 (1.1.0) to R4.3.2 (1.0.0) Mediation is tentatively planned for Spring 2024

Impacts to Current SCDS MIS Consumers

- **SWIM Cloud Distribution Service (SCDS) MIS Consumers will NOT have their subscriptions updated with R4.15 (1.1.0) Mediation**
- **SCDS MIS Consumers will need to update their Consumer interfaces to be compatible with R4.15 (1.1.0) prior to first R4.15 (1.1.0) going operational in March 2023**

Testing with R4.15 (1.1.0)

- **SWIM and TBFM are taking steps to provide availability of a R4.15 data feed in the FTI National Test Bed (FNTB)**
- **NESG MIS users can request to have their FNTB test subscription to be updated to test with R4.15 (1.1.0)**
- **The MIS JMSDD versions naming convention will change from TBFM release numbers to new version numbers**
 - 1.0.0 and 1.1.0 are the MIS JMSDD version numbers
 - Ex. R4.3.2 (1.0.0), R4.15 (1.1.0)
- **NAS Service Registry and Repository (NSRR) has been updated with the R4.15 (1.1.0) documentation and sample data**
 - Translation files, schema, MIS JMSDD v1.1.0, 1hr of sample data:
<https://nsrr.faa.gov/services/tbfm-mis/documents>
 - Zip File: TBFM-MIS-v1.1.0 JMSDD Package – Draft – 6-23-2021.zip
 - 1hr TXT File: mis415MsgSample_TextFileXML.txt

Next Steps

- **Current NESG Consumers of MIS R4.3.2 (1.0.0)**
 - Notify your SWIM POC if you would like to opt out from having your SWIM subscription updated to consume R4.15 (1.1.0) to R4.3.2 (1.0.0) Mediation
 - Notify your SWIM POC if you would like to have your FNTB test subscriptions updated to test with R4.15 (1.1.0)
 - Plan to update your existing MIS Consumer interface to be natively compatible with R4.15 (1.1.0) by Spring 2024
- **Current SCDS Consumers of MIS R4.3.2 (1.0.0)**
 - Review NSRR R4.15 (1.1.0) documentation and sample data, and begin updating your SCDS Consumer interface accordingly
 - Updates for native Consumer compatibility with R4.15 (1.1.0) should be completed prior to first R4.15 (1.1.0) site going operational in March 2023

Questions?



Contact Info

✉ **Samantha Witt**
TBFM Program Manager
samantha.j.witt@faa.gov

✉ **Yong Li**
TBFM Project Lead
yong.li@faa.gov



BACKUP



**Federal Aviation
Administration**

Contents of TBFM - Release 4.15

TBFM Release 4.15 (1.1.0) provides the following MIS additions :

- **Versioning**
- **Departure Airport**
- **Destination Airport**
- **Computer Identifier (CID)**
- **Global Unique Flight Indicator (GUFI)**
- **Heartbeat Message**

*Image taken from ATCA newsletter

MIS Data Category

MIS Data Category (Message Types)	MIS Messages
Aircraft information	Flight Plan Information, ETAs, STAs, Meter Reference Element (MRE) information, and Scheduling information
Configuration information	Arrival Airport Configuration Information, Airport Acceptance Rate Group, TRACON Acceptance Rate Group, Meter Point Acceptance Rate Group, Runway Acceptance Rate Group, Super Stream Class Configuration Group, and Satellite Airport Configuration Group
Status Group/Other	TBFM Metering Status, TBFM Interface Status
Adaptation Information	TRACON Name, Gate Name, Arrival Airport Information, Airport Configuration, and MRE Information
Synchronization	System Sync Start, Periodic Sync Start, Periodic Sync End
Heartbeat Message	Sync message body

*Image taken from ATCA newsletter