



European ATM Service Description for the AirportFlightInformationPublication Service

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Abstract

This document describes the service "Airport Flight Information Publication". It is the result of the "Service Design" step of the B.4.3 Working Method on Services. The Service design has been performed in the context of Service Activity FT10 entailing Airport Collaborative Decision Making services.

The *AirportFlightInformationPublication* service supports the Airport CDM concept and its implementation by providing the A-CDM partners with Common Situation Awareness about flights at a CDM airport.

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Executive summary

This document describes the service “Airport Flight Information Publication”. It is the result of the “Service Design” step of the B.4.3 Working Method on Services. The Service Design has been performed in the context of Service Activity FT10 entailing Airport Collaborative Decision Making services.

The *AirportFlightInformationPublication* service supports the Airport CDM concept and its implementation by providing the A-CDM partners with Common Situation Awareness about flights at a CDM airport.

FT10 was based on IP1- A-CDM. The activity has happened in the frame of OFA5.1.1 (WP6 and WP12). The work has been performed in joint collaboration with the AACO project of the ACI ACRIS working group.

The design complies with the ISRM Foundation.

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1 Introduction

1.1 Purpose of the document

The purpose of this Service description is to provide a holistic overview of the *AirportFlightInformationPublication* service and its building blocks. It services as a complement to a model based description and supports the configuration management process by providing well-defined baselines.

The service description document is also the foundation material for the standardisation process.

1.2 Intended readership

This service description is intended to be read by Enterprise Architects, Service Architects, Information Architects, System Engineers and Developers in pursuing architecting, design and development activities.

1.3 Inputs from other projects

Operational requirements are derived from IP1 A-CDM [10].

1.4 Glossary of terms

No terms beyond the ones accepted by SESAR have been identified yet.

1.5 Acronyms and Terminology

1.5.1 Acronyms

Term	Definition
AACO	ACRIS Airport CDM Operational project
A-CDM	Airport Collaborative Decision Making
ACGT	Actual Commencement of Ground Handling Time
ACI	Airport Council International
ACISP	Airport CDM Information Sharing Platform
ACRIS	Airport Community Recommended Information Services
ACZT	Actual Commencement of De-icing Time
ADD	Architecture Description Document
AEZT	Actual End of De-icing Time
AIBT	Actual In-Block Time

Term	Definition
AIDX	Aviation Information Data Exchange
AIRM	Aeronautical Information Reference Model
ALDT	Actual Landing Time
AOBT	Actual Off-Block Time
ARDT	Actual Ready Time (for Movement)
ARZT	Actual Ready for De-icing Time
ASAT	Actual Start Up Approval Time
ASBT	Actual Start Boarding Time
ASRT	Actual Start Up Request Time
ATM	Air Traffic Management
ATOT	Actual Take Off Time
ATS	Air Traffic Services
CDM	Collaborative Decision Making
CLDM	Consolidated Logical Data Model
CSA	Common Situational Awareness
CTOT	Calculated Take Off Time
EATMA	European Air Traffic Management Architecture
E-ATMS	European Air Traffic Management System
ECZT	Estimated Commencement of De-icing Time
EDIT	Estimated De-icing Time
EEZT	Estimated End of De-icing Time
EIBT	Estimated In-Block Time
ELDT	Estimated Landing Time
EOBT	Estimated Off-Block Time
ERZT	Estimated Ready for De-icing Time
EXOT	Estimated Taxi-Out Time

Term	Definition
FAA	Federal Aviation Administration
GUFID	Globally Unique Flight Identifier
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IER	Information Exchange Requirement
IFPL	Individual Flight Plan message
IFPS	Integrated Initial Flight Plan Processing System
ISRM	Information Service Reference Model
MEP	Message Exchange Pattern
MG	ISRM Modelling Guidelines
NAF	NATO Architecture Framework
NAV	NATO All View
NFR	Non-Functional Requirement
NOV	NATO Operational View
NSOV	NATO Service Oriented View
NSV	NATO System View
OSD	Operational Service and Environment Definition
QoS	Quality of Service
SDD	Service Description Document
SESAR	Single European Sky ATM Research Programme
SESAR Programme	The programme which defines the Research and Development activities and Projects for the SJU.
SIBT	Scheduled In-Block Time
SID	Standard Instrument Departure
SJU	SESAR Joint Undertaking (Agency of the European Commission)
SJU Work Programme	The programme which addresses all activities of the SESAR Joint Undertaking Agency.

Term	Definition
SoaML	Service Oriented Architecture Modelling Language
SOBT	Scheduled Off-Block Time
SWIM	System Wide Information Management
TOBT	Target Off-Block Time
TSAT	Target Start Up Approval Time
TTOT	Target Take Off Time
UFI	Unique Flight Identifier
UML	Unified Modelling Language
V&V	Validation and Verification
WSDL	Web Services Definition Language
XSD	XML Schema Definition

1.5.2 Terminology

Term	Definition	Source
Capability	Capability is the ability of one or more of the enterprise's resources to deliver a specified type of effect or a specified course of action to the enterprise stakeholders.	EATMA Guidance Material [8]
Capability Configuration	A Capability Configuration is a combination of Roles and Systems configured to provide a Capability derived from operational and/or business need(s) of a stakeholder type.	EATMA Guidance Material [8]
Node	A logical entity that performs Activities. Note: nodes are specified independently of any physical realisation.	EATMA Guidance Material [8]
Service	The contractual provision of something (a non-physical object), by one, for the use of one or more others. Services involve interactions between providers and consumers, which may be performed in a digital form (data exchanges) or through voice communication or written processes and procedures.	EATMA Guidance Material [8]
Service function	A type of activity describing the functionality of a Service.	EATMA Guidance Material [8]
Service interface	The mechanism by which a service communicates	EATMA Guidance Material [8]

1.6 Introduction to the A-CDM Services

1.6.1 Joint Service Activity

The Service Activity concerns IP1 A-CDM which OFA 05.01.01 considers as the baseline for future concepts on Airport Operations Management.

Airport CDM is about partners (airport operators, aircraft operators/ground handlers, ATC and the Network Operations) working together more efficiently and transparently, with a special focus on information sharing. These A-CDM Partners often have their own information systems, which must be integrated in order to support the A-CDM processes. There is a need for establishing modern techniques and standardisation across the industry for maximising the benefits of the automation required at each airport, using approaches like Service Oriented Architecture (SOA), web services, and XML data exchanges that are known to help and support interoperability.

The designed A-CDM services result from a joint service activity between SESAR and ACI. Within ACI (Airport Council International), the ACRIS (Airport Community Recommended Information Services) working group had set up the project AACO (ACRIS Airport CDM Operational project). Within SESAR the Service Coordination Group had set up the FT10 Service Activity.

As AACO and FT10 were quite similar, it was decided to run a joint service activity, with common objective, scope and deliverable. This joint service activity has been run with close and effective collaboration, following the SESAR Method on Services.

The main driver of the service activity is to enable all European CDM-Airports to provide the same re-usable services to Airlines, Ground Handlers and ATCs for A-CDM information sharing.

The focus is on airlines for getting an overview of their flights across Europe plus being able to update TOBT for several airports with the same interface. Additional Focus: OFA5.1.1 and SESAR (DMAN etc.) driven, pre-departure sequencing is a fundamental SESAR concept that needs TSAT and TTOT.

As a consequence the scope has been defined as

- Publication of information to enable Common Situational Awareness (CSA) for inbound flights, outbound flights and corresponding CDM flight alerts.
- Updating of key time values for turnarounds (TOBT) and outbound flights (TSAT and TTOT).

Out of scope:

- Inbound updates (ELDT, EIBT): Out of scope since it may not fit into the focus areas. If there is enough reason to decide it is in scope of the focus area, there may be a possible extension later on.
- Actual timestamps. As there are many different sources at different airports, there is little potential for reuse. If there is enough reason to decide it is in scope of the focus area, there may be a possible extension later on.
- Communication with the Flight Crew
- For all elements out-of-scope there is no recommended practice on how to implement it. Information exchanges with the Network Manager are part of SVA001 on AOP/NOP Integration.

1.6.2 Overview of the AirportCDM services

1.6.2.1 Taxonomy

In the scope of the work, four A-CDM services have been identified. Each of these services is defined as a specialisation of the abstract AirportCDM Service

The following diagram describes the service taxonomy of the AirportCDM services.

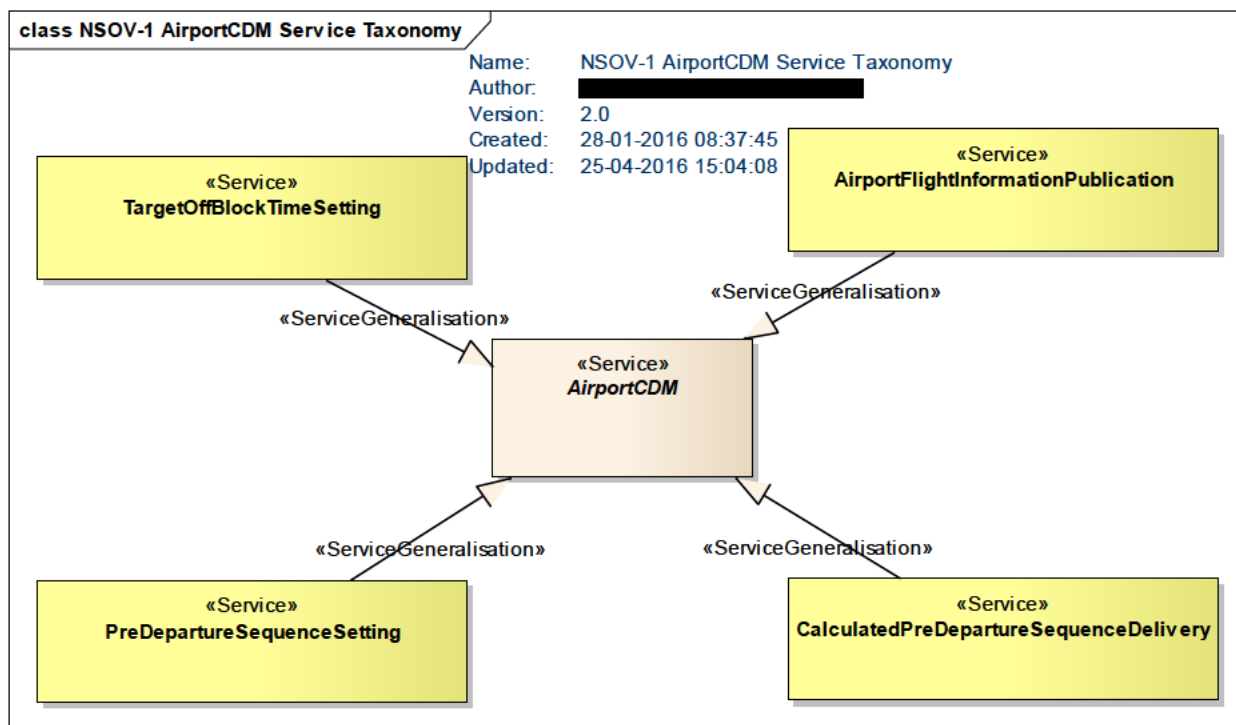


Figure 1 NSOV-1 AirportCDM Service Taxonomy

1.6.2.2 Services in Operational Node context

The following diagram describes the operational nodes interaction for the four A-CDM services, in which the Airport OPS Support node is providing the four services and the other nodes are consuming some of the services.

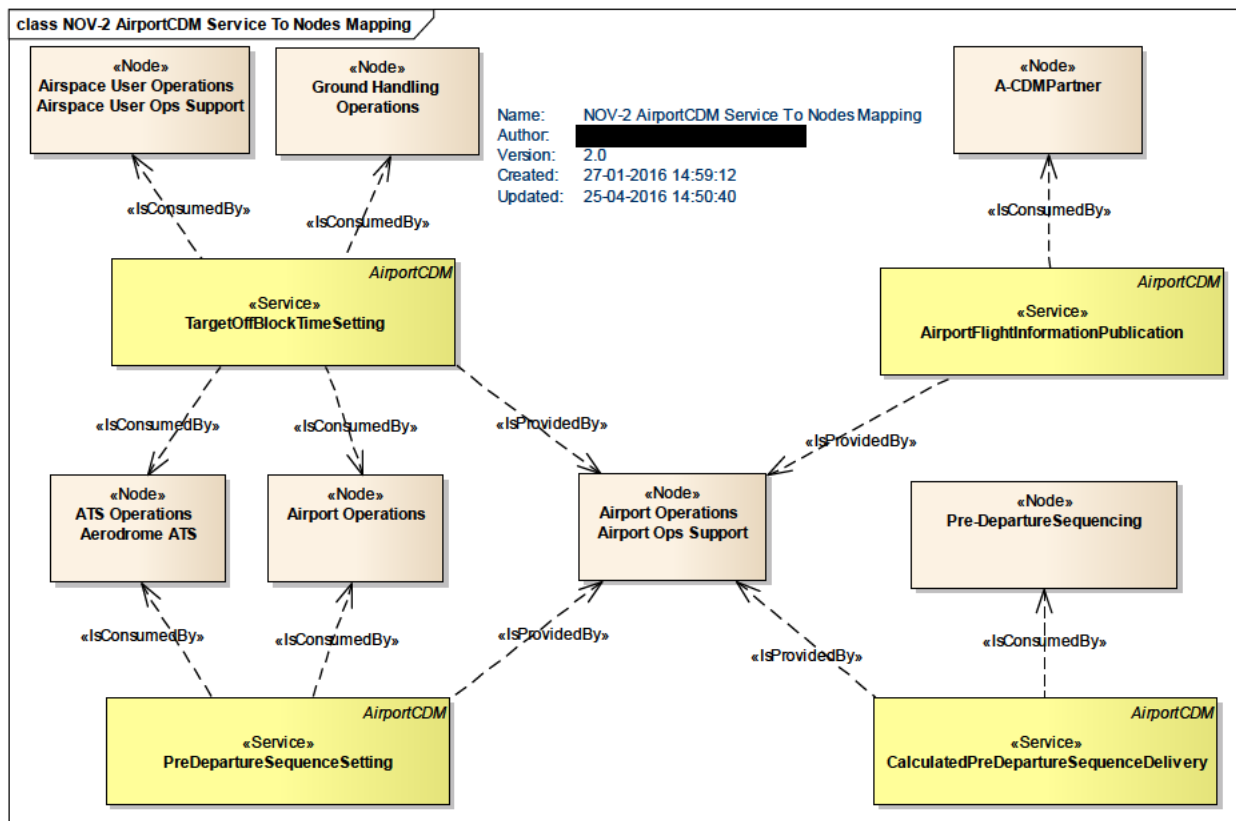


Figure 2 NOV-2 AirportCDM Service to Node Mapping

1.6.2.3 Overview with Interfaces and Operations

Each service is fully detailed in its own Service Description Document (SDD).

The rest of this section provides an overview of the services (name, interfaces and operations) in table and diagram format.

Service	Service Interface Definition	Operation
AirportFlightInformationPublication	AirportFlightInformationPublisher	subscribeInboundFlight
		subscribeOutboundFlight
		subscribeFlightAlert
		unsubscribeInboundFlight
		unsubscribeOutboundFlight
	AirportFlightInformationSubscriber	publishInboundFlight
		publishOutboundFlight
		publishFlightAlert
TargetOffBlockTimeSetting	TOBTSettingReceiver	setTOBT
		deleteTOBT
PreDepartureSequenceSetting	PreDepartureSequenceSettingReceiver	setTSAT
		setTTOT
CalculatedPreDepartureSequenceDelivery	CalculatedPreDepartureSequenceListener	postTSAT
		postTTOT

Table 1 Summary table of the AirportCDM services

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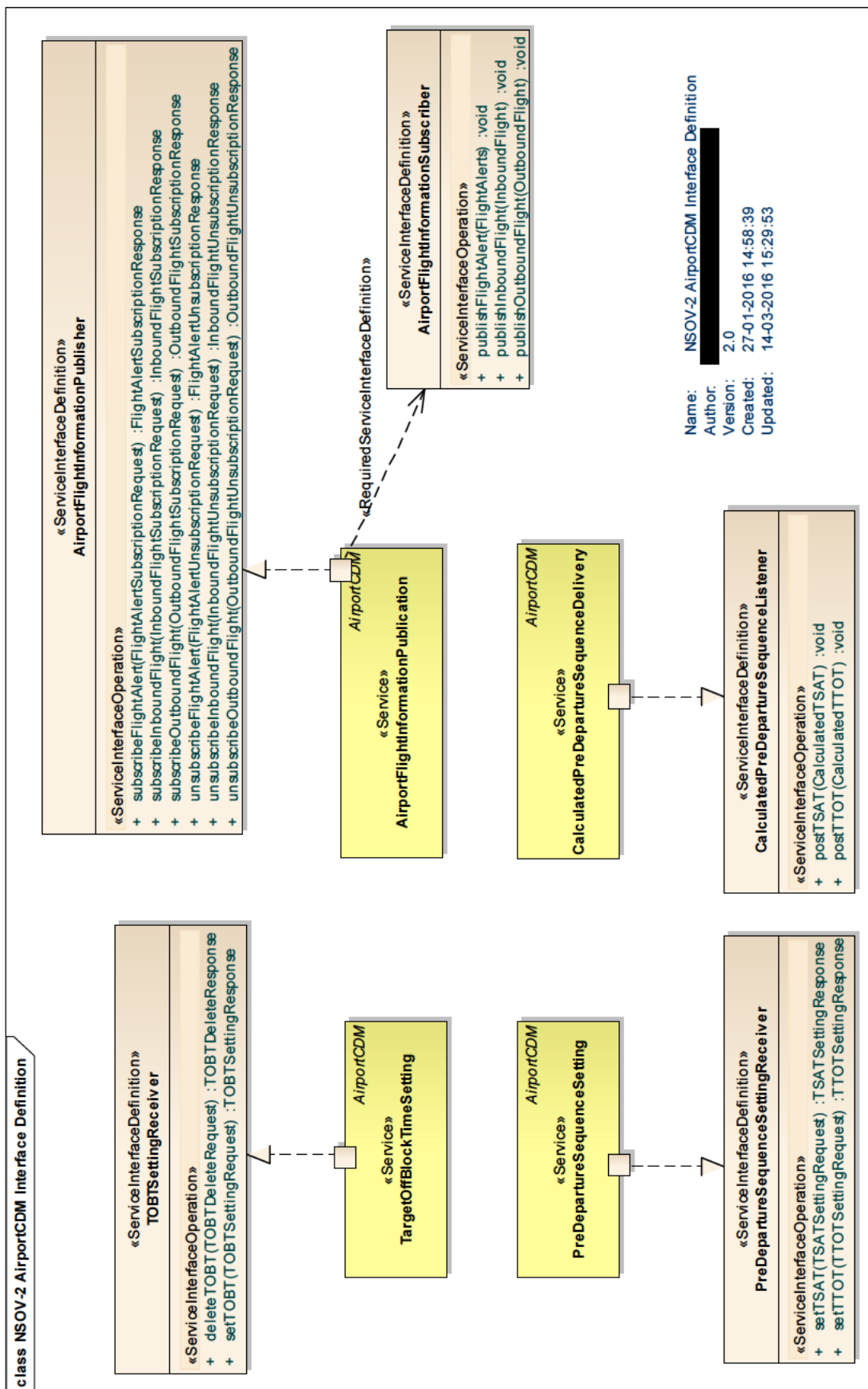


Figure 3 NSV-12 AirportCDM Interface Definition

1.6.2.4 Services in System context

The following diagram describes the service provision of the A-CDM services in which Airport CDM Information Sharing Platform (ACISP) is the provider for all four services. It also shows which system is potentially a consumer for each of the services

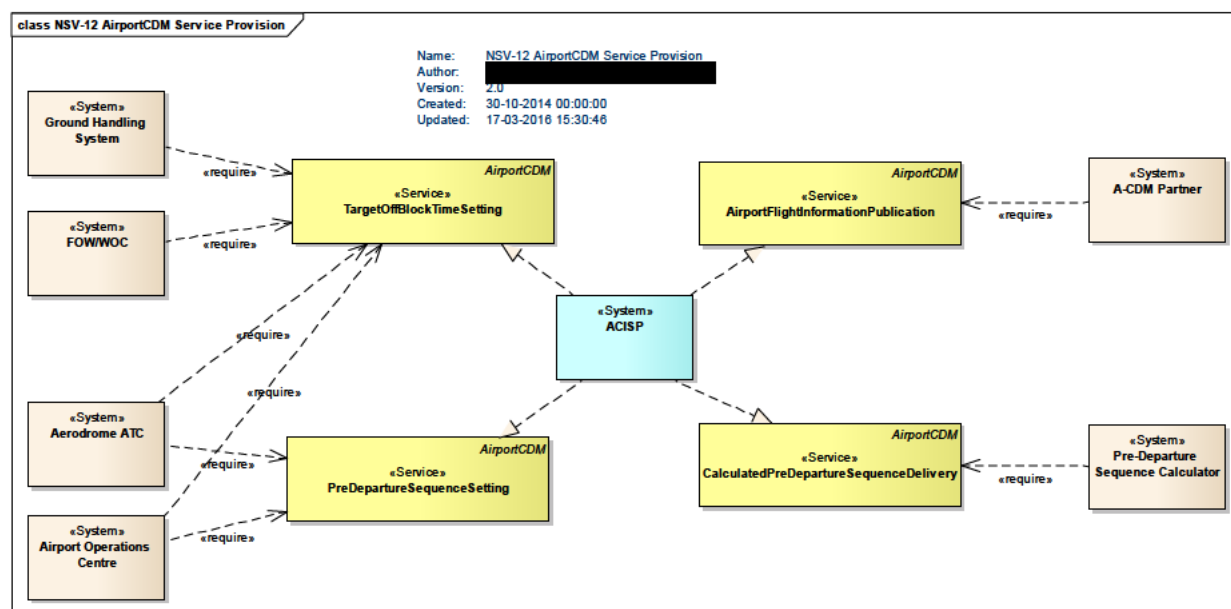


Figure 4 NSV-12 AirportCDM Service Provision

1.6.3 Beyond Service Design

Interoperability is not only about services, it also concerns the exchange standard used to encode and structure exchanged information. Both SESAR SWIM and ACI ACRIS favour the use of XML standards for data exchange.

For exchanging flight information, which is the scope of the A-CDM services two XML standards have been identified: AIDX and FIXM. The Aviation Information Data Exchange (AIDX) is a mature exchange standard, developed by IATA and supported by ACI. AIDX is being used operationally. The Flight Information Exchange Model (FIXM), still under development, is supported by the international ATM community, with players such as EUROCONTROL, FAA, SESAR, and Airservices Australia, among others.

Both FIXM and AIDX were recognised as valid candidates for encoding the service payload of the A-CDM services implementation instances. However, depending on the nature of the A-CDM partner, e.g. ATC Tower or Ground Handler, FIXM or AIDX might seem more “natural”.

The decision taken is to allow for both options, SESAR prototypes will experience the A-CDM services with FIXM, while ACRIS prototypes will do so with AIDX. This would not only provide feedback on both approaches, it also might help learning in bridging them.

As FIXM in its current development status does not support all data elements required for the A-CDM services, the FIXM extension mechanism has been used to close the gap. This has resulted in the “Europe A-CDM FIXM Extension v1.0” for FIXM 2.0 which is publicly available at www.fixm.aero.

2 Service identification

Name	AirportFlightInformationPublication
ID	{B3EBA95A-AD86-4b52-9E35-DA65F659608E}
Version	2.0
Keywords	Airport, CDM, Time event, Publication, Common Situational Awareness
Architect(s)	████████████████████ (EUROCONTROL)

Lifecycle status	Date	References
Identified	08/11/2013	See reference [11]
Allocated	19/12/2013	See reference [12]
Designed	28/11/2014	This document
Validated	<i>Date when validated. Filled by WP3</i>	<i>Name of protocol documenting the decision</i>
IOC	<i>Date for Initial Operational Capability</i>	<i>Reference to technical enabler hosting the service in the ATM master plan</i>
FOC	<i>Date for Full Operational Capability</i>	<i>Reference to technical enabler hosting the service in the ATM master plan</i>

3 Operational and Business context

Information Sharing is essential to A-CDM, and forms the foundation for all other elements of the Milestone approach.

Excerpt from the A-CDM Implementation Manual [10]:

Airport CDM Information Sharing Concept Element	<p>The Information Sharing Element defines the sharing of accurate and timely information between the Airport CDM Partners in order to achieve common situational awareness and to improve traffic event predictability</p> <p>The Airport CDM Information Sharing Platform (ACISP), together with defined procedures agreed by the partners, is the means used to reach these aims</p> <p>Information Sharing is the core Airport CDM Element and the foundation for the other Airport CDM Elements. It needs to be implemented before any other Concept Element</p>
--	---

Figure 5 Airport CDM Information Sharing Concept Element

This service covers the need for all A-CDM Partners, except for External Stakeholders such as the Network Manager.

This service aims to achieve the distribution of information related to the transit of an aircraft at a CDM airport such that the corresponding A-CDM Partners can achieve their work while sharing the same information on what is planned and what is actually happening.

At a high level the information to be shared corresponds to the 3 Information Elements: A-CDM Inbound Flight, A-CDM Outbound Flight, and A-CDM Flight Alert.

It is important to note that local airport policy can limit the information actually being shared with each partner, either at data element level (eg Target Take-Off Time not shared to Ground Handlers), or at flight level (eg only for the flights you are concerned with).

3.1 Information Exchange Requirements

The following diagram describes the information exchange requirements that the *AirportFlightInformationPublication* service is satisfying:

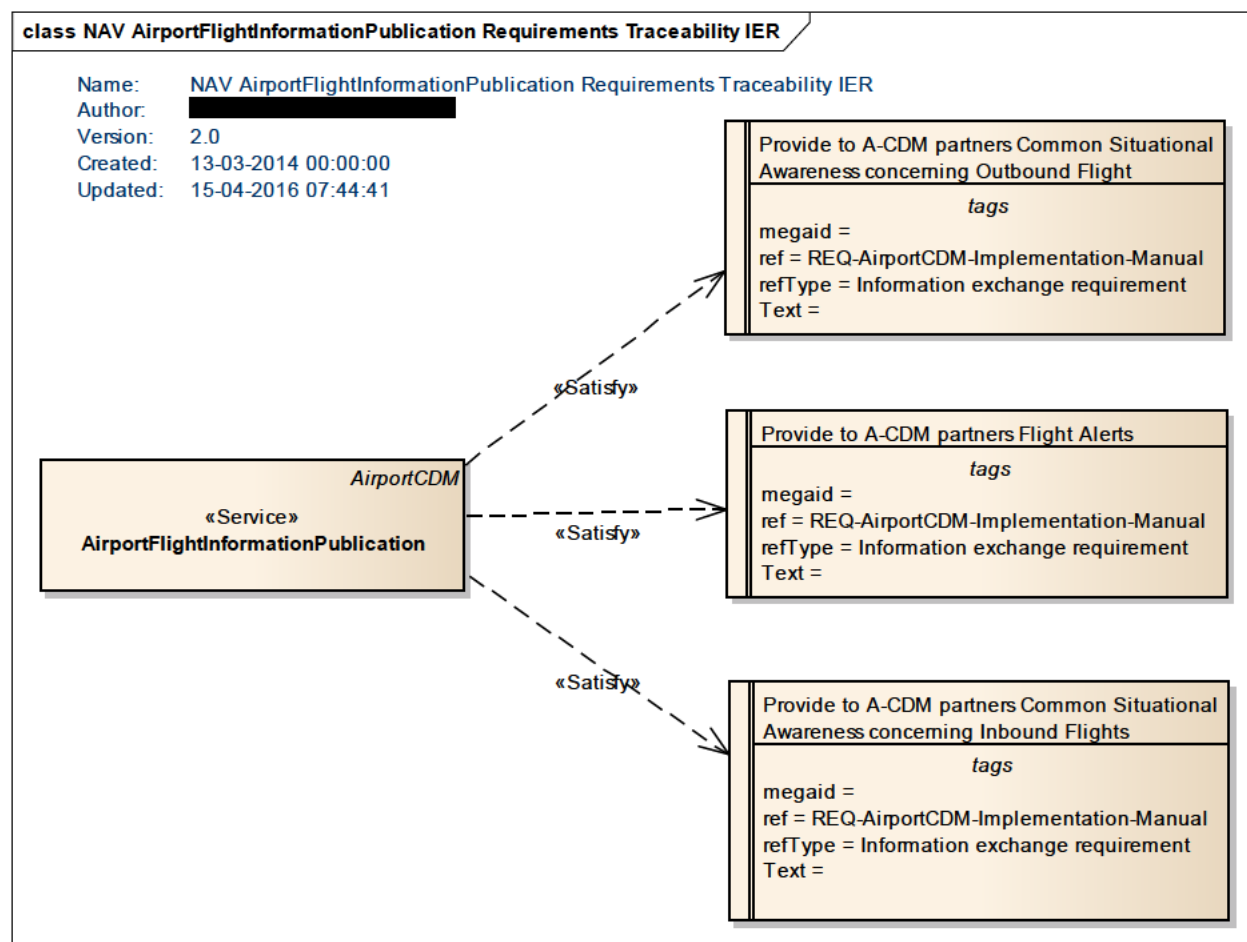


Figure 6: NAV *AirportFlightInformationPublication* Requirements Traceability IER diagram

The *AirportFlightInformationPublication* service is defined to satisfy three IERs:

- To provide to A-CDM partners Common Situational Awareness concerning inbound flights. This implies providing most updated information of arrival flights to the A-CDM partners.
- To provide to A-CDM partners Common Situational Awareness concerning outbound flights. This implies providing most updated information of departure flights to the A-CDM partners.
- To provide to A-CDM partners with A-CDM Flight Alerts. These flight alerts are triggered under certain circumstances; all defined in the A-CDM Implementation Manual. [10]

3.2 Other Requirements

3.2.1 Non-Functional Requirements

The following diagram describes the non-functional requirements for the *AirportFlightInformationPublication* service.

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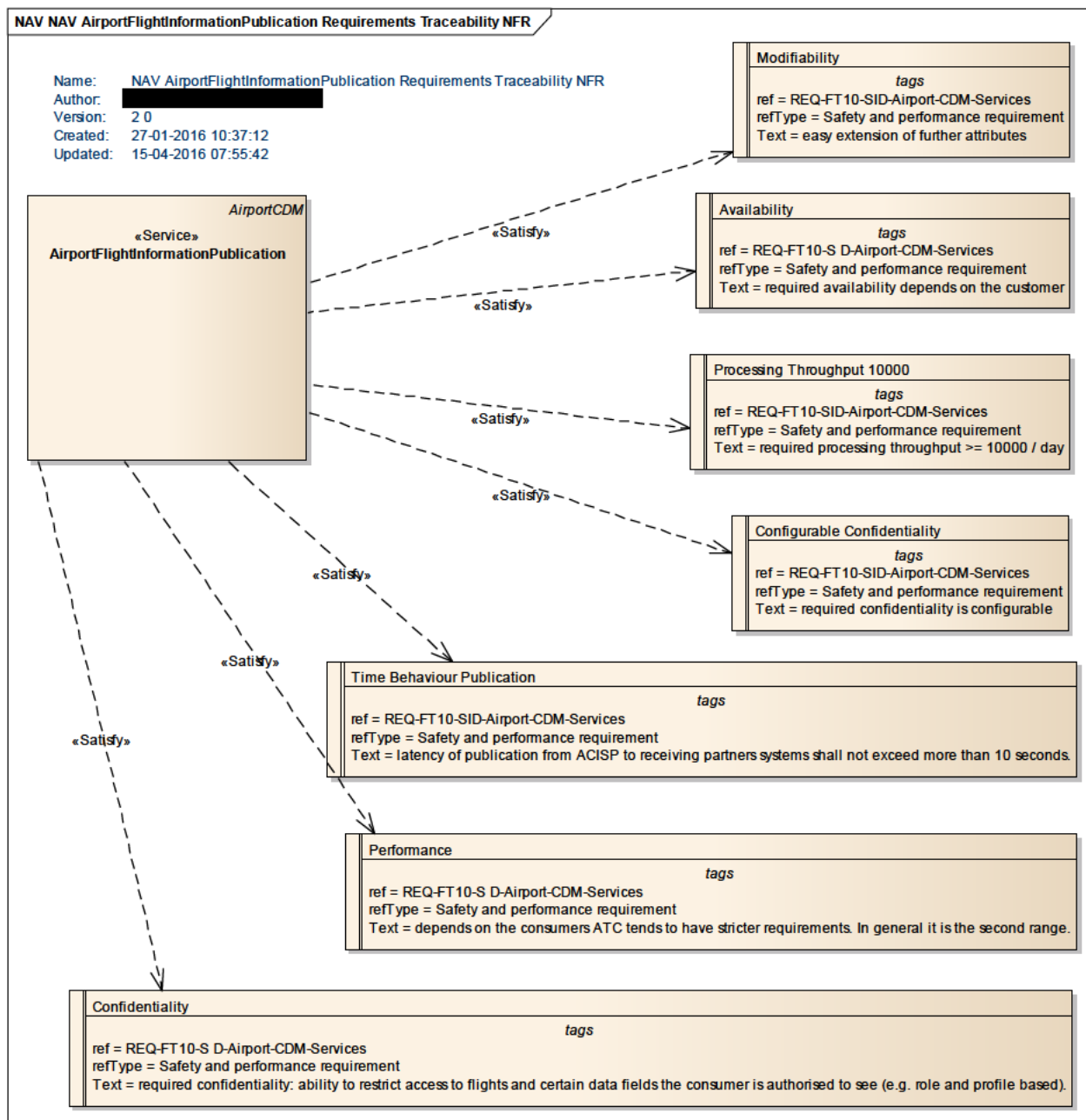


Figure 7: NAV AirportFlightInformationPublication Requirements Traceability Nfr diagram

3.2.2 Relevant Industrial Standards

No standard is currently required for the service.

3.2.3 Nodes

The following diagram describes the operational nodes which are expected to provide and/or consume the AirportFlightInformationPublication service.

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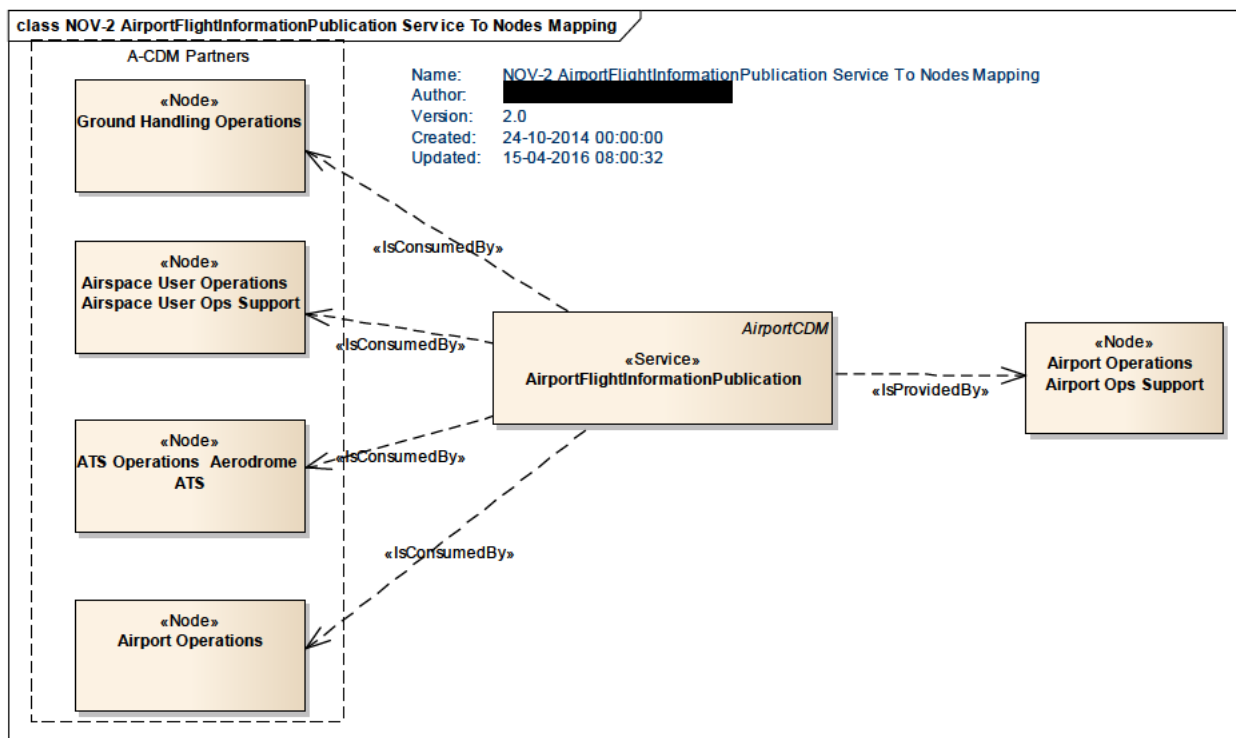


Figure 8 NOV-2 *AirportFlightInformationPublication* Service To Nodes Mapping

This service aims to enable interaction between the Ground Handling, Airspace User Ops Support, Aerodrome ATS and Airport Operations with the Airport CDM Operations.

4 Service overview

The *AirportFlightInformationPublication* service is part of a series of services that help automate the A-CDM process at a CDM Airport. It publishes flight information to all A-CDM Partners that need it.

In particular, this service provides publication under subscription of inbound flights, landing in the airport; outbound flights, taking off from the airport; and their system generated alerts, here called Flight Alerts.

Note that technical details of the service, such the subscription identifier, are out of the scope of this document. This document sticks to the pure logical definition of the service and it is up to the service implementation to decide technical solutions.

4.1 Service Taxonomy

The service taxonomy is described in the ISRM Service Portfolio document[9].

4.2 Service Levels (NfRs)

Non Functional Requirements are described in section 3.2.1.

4.3 Service Functions and Capabilities

The following diagrams describe the functions and capabilities provided by this service:

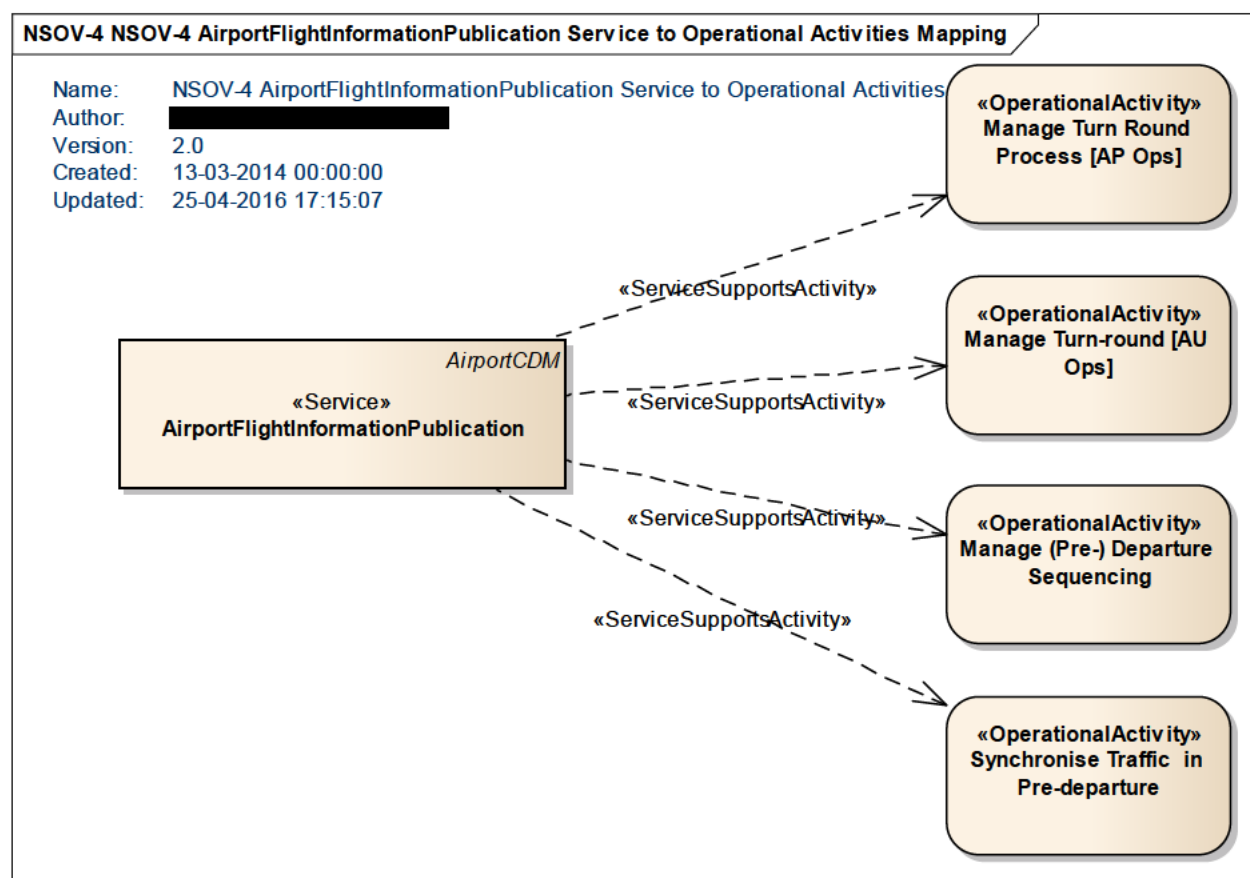


Figure 9: NSOV-4 *AirportFlightInformationPublication* Service to Operational Activities Mapping diagram

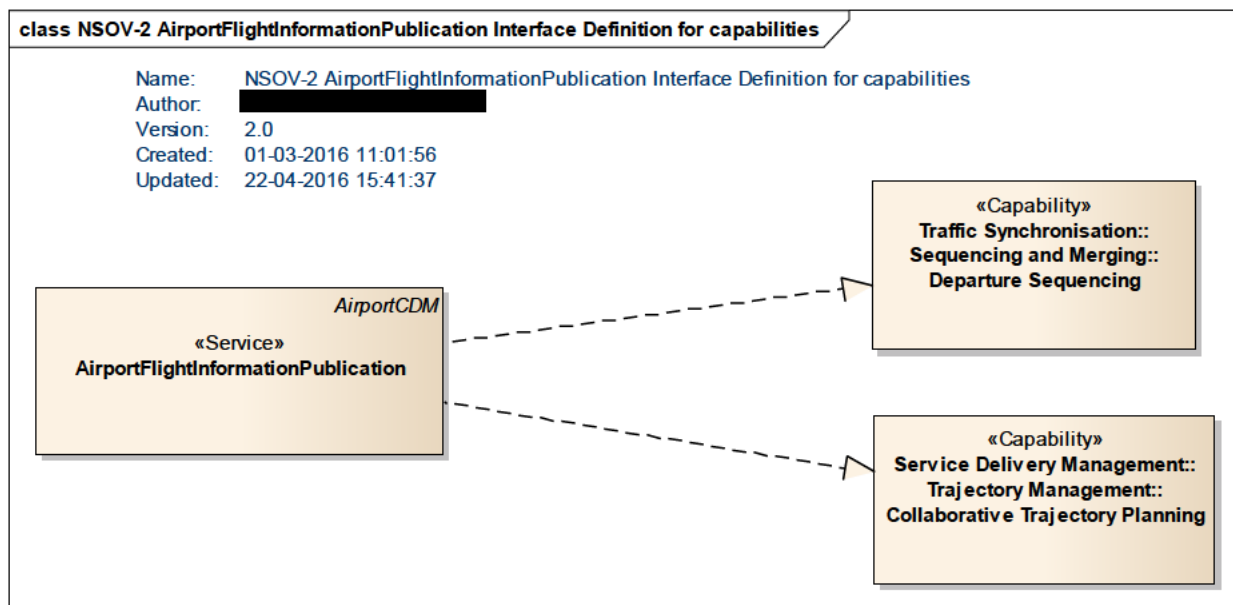


Figure 10: NSOV-2 *AirportFlightInformationPublication* Interface Definition diagram for capabilities

4.4 Service Interfaces

The *AirportFlightInformationPublication* service is based on the single interface *AirportFlightInformationPublicationInterface*, providing Publish/Subscribe Push Message Exchange Pattern (MEP) interaction

The following diagram describes the service interface definitions of this service:

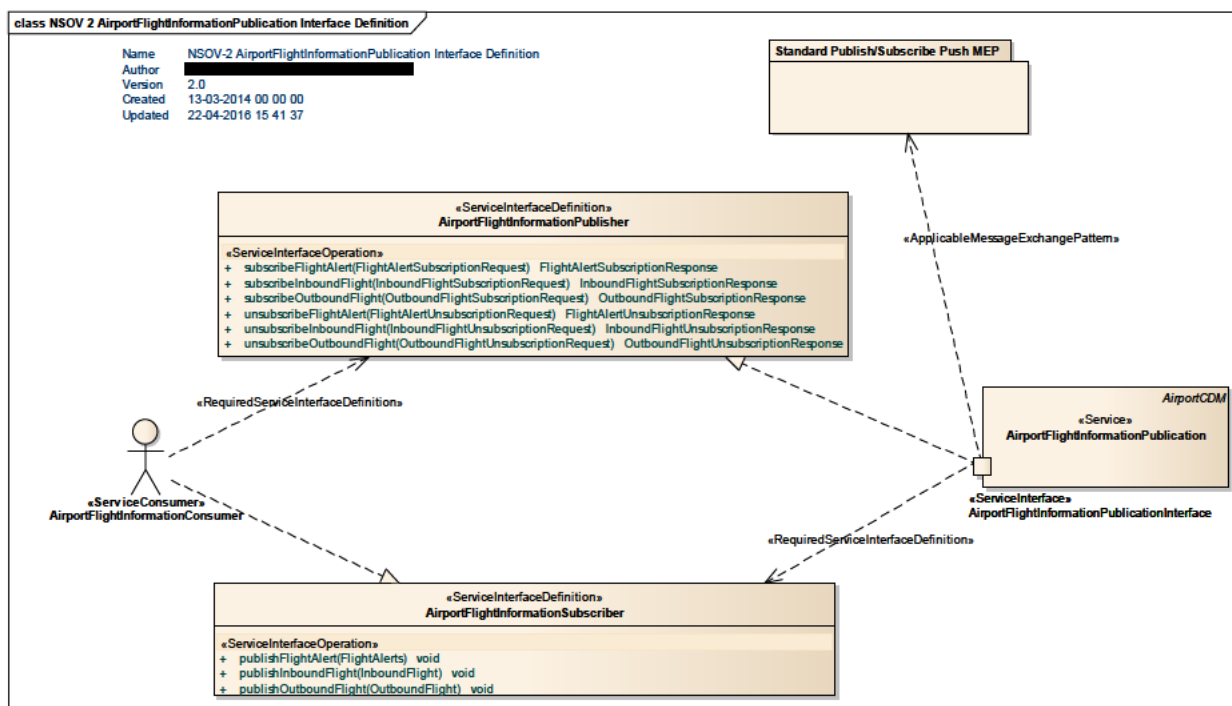


Figure 11: NSOV-2 AirportFlightInformationPublication Interface Definition diagram

ServiceInterface	ServiceInterfaceDefinition	ServiceInterfaceOperation	Role
AirportFlightInformationPublicationInterface	AirportFlightInformationPublisher	subscribeInboundFlight	provided
AirportFlightInformationPublicationInterface	AirportFlightInformationPublisher	subscribeOutboundFlight	provided
AirportFlightInformationPublicationInterface	AirportFlightInformationPublisher	subscribeFlightAlert	provided
AirportFlightInformationPublicationInterface	AirportFlightInformationPublisher	unsubscribeInboundFlight	provided
AirportFlightInformationPublicationInterface	AirportFlightInformationPublisher	unsubscribeOutboundFlight	provided
AirportFlightInformationPublicationInterface	AirportFlightInformationPublisher	unsubscribeFlightAlert	provided
AirportFlightInformationPublicationInterface	AirportFlightInformationSubscriber	publishInboundFlight	required
AirportFlightInformationPublicationInterface	AirportFlightInformationSubscriber	publishOutboundFlight	required
AirportFlightInformationPublicationInterface	AirportFlightInformationSubscriber	publishFlightAlert	required

Table 2: Service Interface and operations

5 Service interface specifications

5.1 Service Interface

AirportFlightInformationPublicationInterface

The *AirportFlightInformationPublicationInterface* is based on two service interface definitions together implementing Publish/Subscribe Push Message Exchange Pattern (MEP) interaction:

- *AirportFlightInformationPublisher* contains the subscription and unsubscription operations and is instantiated by the service provider and used by the service consumer to access the service interface definition operations. This interface implements Synchronous Request/Response operations in order to enable un/subscriptions.
- *AirportFlightInformationSubscriber* contains the push publication operations and is instantiated by the service consumer and used by the service provider to access the service interface definition operations. This interface implements One-Way operations (asynchronous by definition) in order to enable push publications.

A graphical representation of this interface is given in Figure 11: NSOV-2 *AirportFlightInformationPublication* Interface Definition diagram.

5.1.1 Service Interface Definition AirportFlightInformationPublisher

The *AirportFlightInformationPublisher* service interface definition provides means to:

- Subscribe and unsubscribe to flight alerts publication, through *subscribeFlightAlert* and *unsubscribeFlightAlert* service interface operations; respectively.
- Subscribe and unsubscribe to inbound flight information publication, through *subscribeInboundFlight* and *unsubscribeInboundFlight* service interface operations; respectively.
- Subscribe and unsubscribe to outbound flight information publication, through *subscribeOutboundFlight* and *unsubscribeOutboundFlight* service interface operations; respectively.

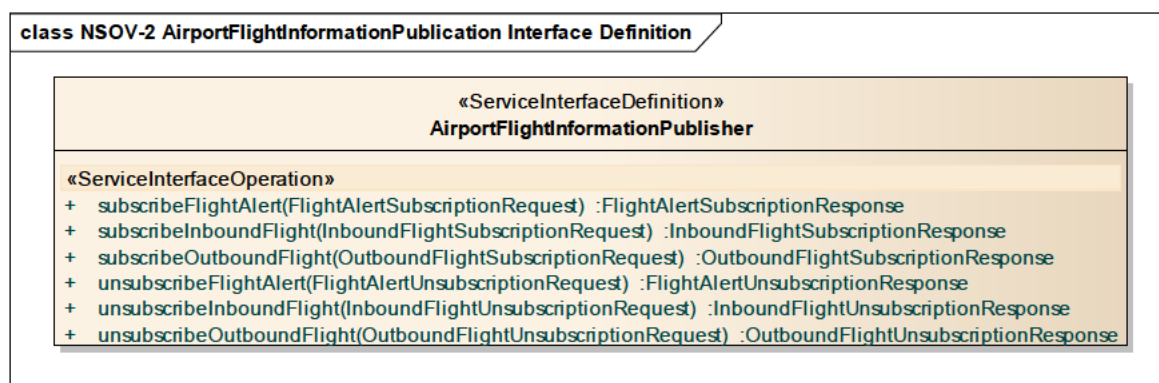


Figure 12: *AirportFlightInformationPublisher* Service Interface Definition

5.1.1.1 Operation subscribeFlightAlert

5.1.1.1.1 Operation Functionality

The *subscribeFlightAlert* Service Interface Operation receives subscription requests for flight alert publications filtered to the specification of the request. The operation returns a confirmation of the validity of such subscription request taking into account local business rules in accordance with the provision of the Service Level Agreement ratified by all the A-CDM partners within the airport.

5.1.1.1.2 Operation Parameters

The operation requires one input parameter: *FlightAlertSubscriptionRequest* message. After the operation is processed, the service provides an output parameter: *FlightAlertSubscriptionResponse*.

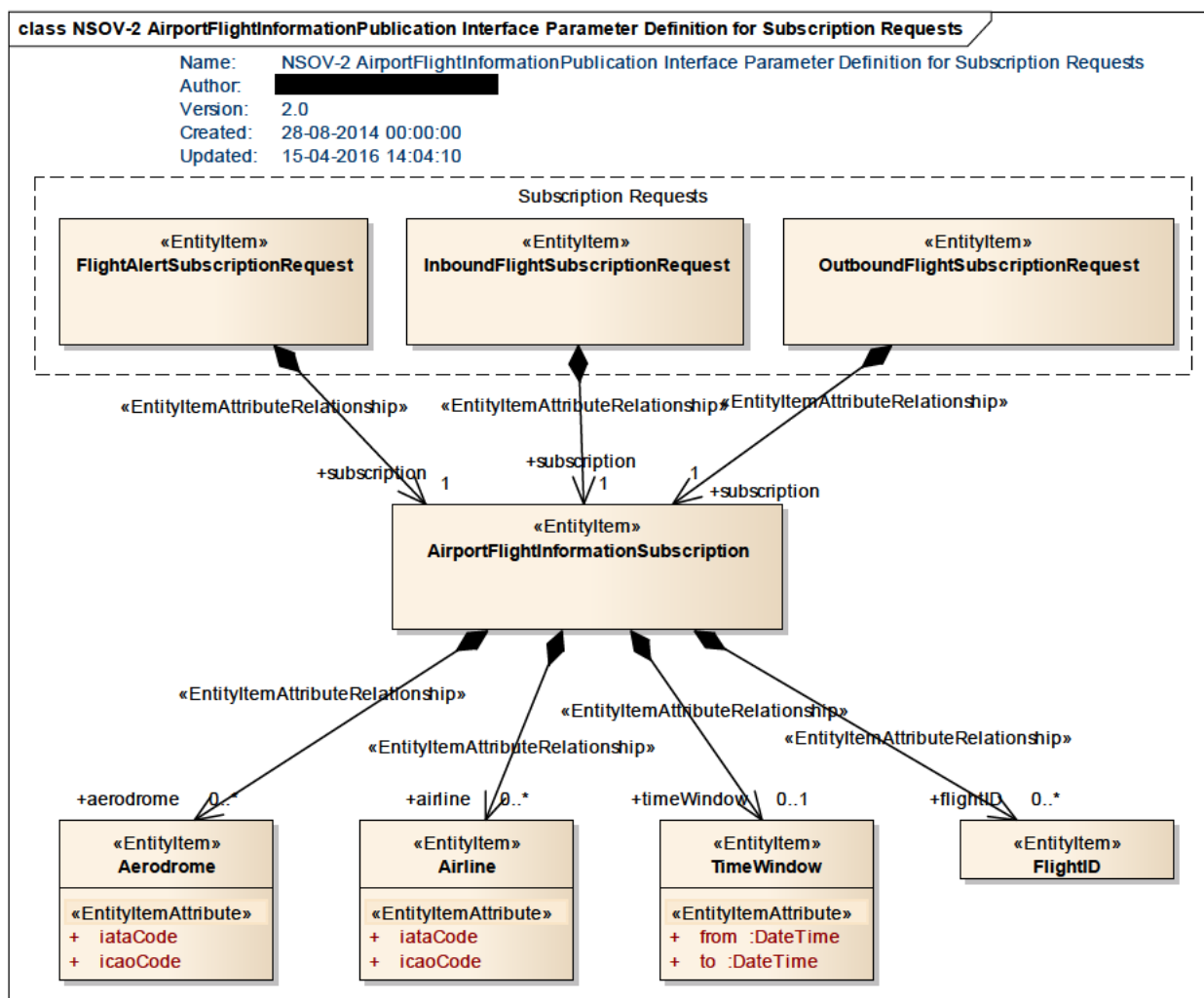


Figure 13: NSOV-2 *AirportFlightInformationPublication* Interface Parameter Definition for Subscription Requests

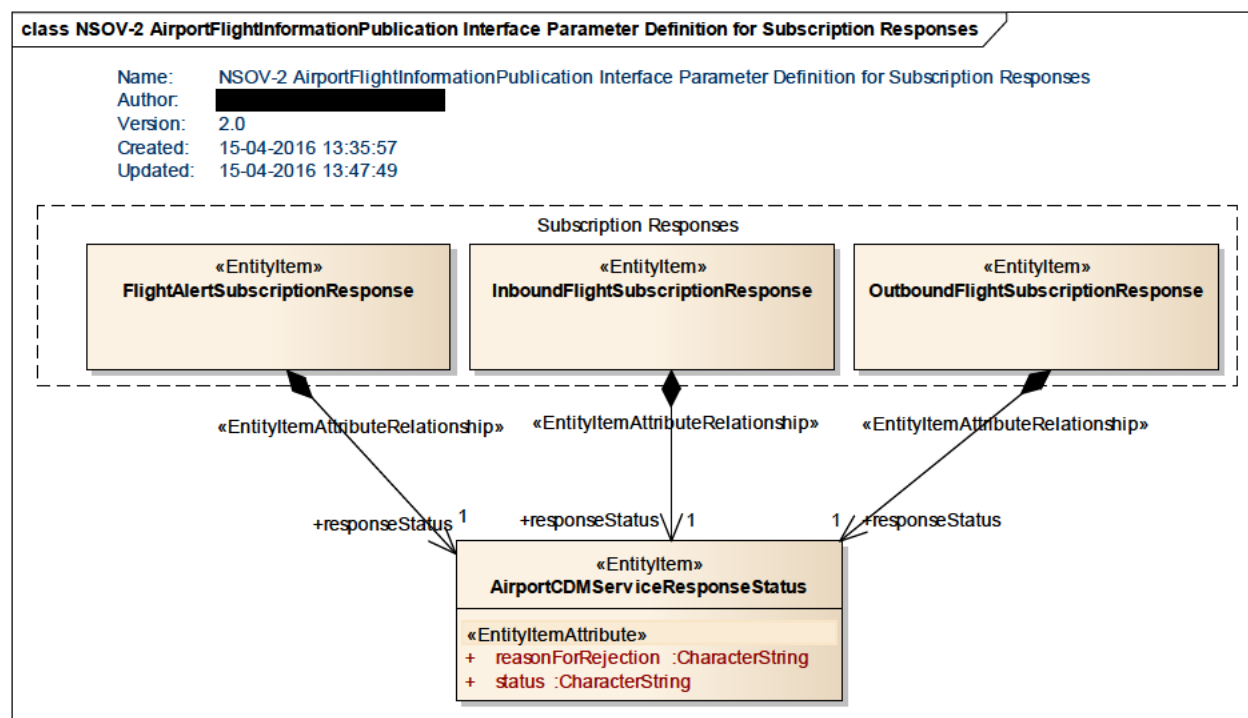


Figure 14: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for Subscription Responses

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.1.2 Operation subscribeInboundFlight

5.1.1.2.1 Operation Functionality

The *subscribeInboundFlight* Service Interface Operation receives subscription requests for inbound flight publications filtered to the specification of the request. The operation returns a confirmation of the validity of such subscription request taking into account local business rules in accordance with the provision of the Service Level Agreement ratified by all the A-CDM partners within the airport.

5.1.1.2.2 Operation Parameters

The operation requires one input parameter: *InboundFlightSubscriptionRequest* message. After the operation is processed, the service provides an output parameter: *InboundFlightSubscriptionResponse*.

See diagrams in Figure 13: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for Subscription Requests and Figure 14: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for Subscription Responses

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.1.3 Operation subscribeOutboundFlight

5.1.1.3.1 Operation Functionality

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The *subscribeOutboundFlight* Service Interface Operation receives subscription requests for outbound flight publications filtered to the specification of the request. The operation returns a confirmation of the validity of such subscription request taking into account local business rules in accordance with the provision of the Service Level Agreement ratified by all the A-CDM partners within the airport.

5.1.1.3.2 Operation Parameters

The operation requires one input parameter: *OutboundFlightSubscriptionRequest* message. After the operation is processed, the service provides an output parameter: *OutboundFlightSubscriptionResponse*.

See diagrams in Figure 13: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for Subscription Requests and Figure 14: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for Subscription Responses

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.1.4 Operation unsubscribeFlightAlert

5.1.1.4.1 Operation Functionality

The *unsubscribeFlightAlert* Service Interface Operation receives unsubscription requests of subscribers to flight alert publications. The operation returns a confirmation of the validity of such unsubscription.

5.1.1.4.2 Operation Parameters

The operation requires one input parameter: *FlightAlertUnsubscriptionRequest* message. After the operation is processed, the service provides an output parameter: *FlightAlertUnsubscriptionResponse*. These service interface parameters are further explained in sections below.

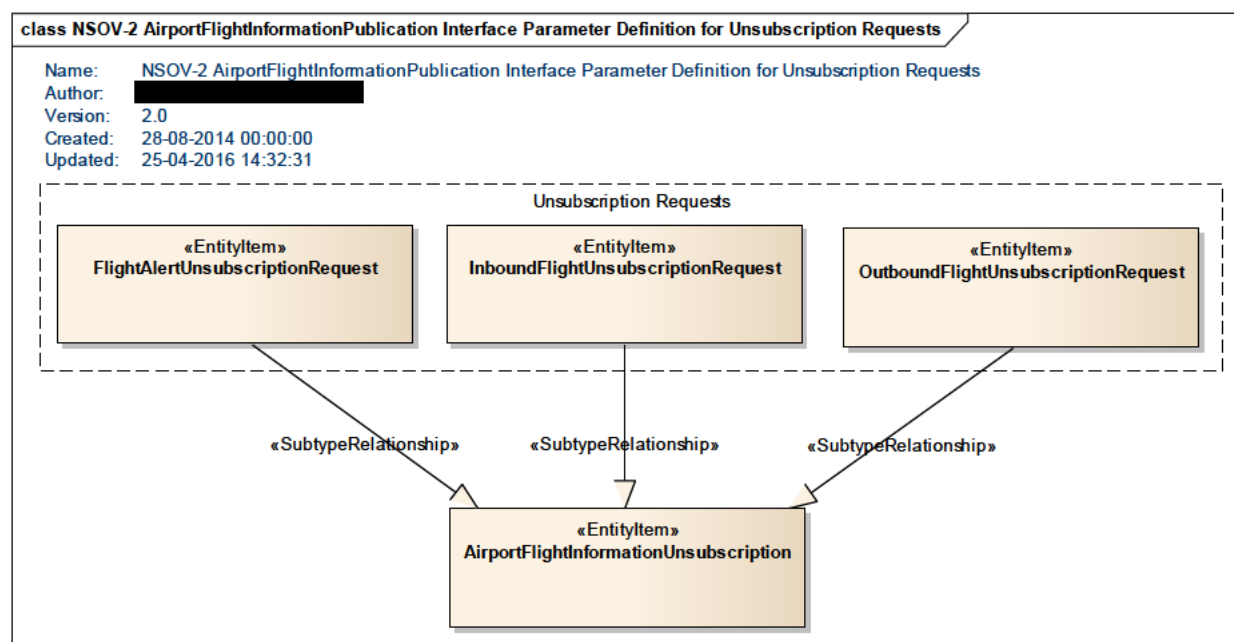


Figure 15: NSOV-2 *AirportFlightInformationPublication* Interface Parameter Definition for Unsubscription Requests

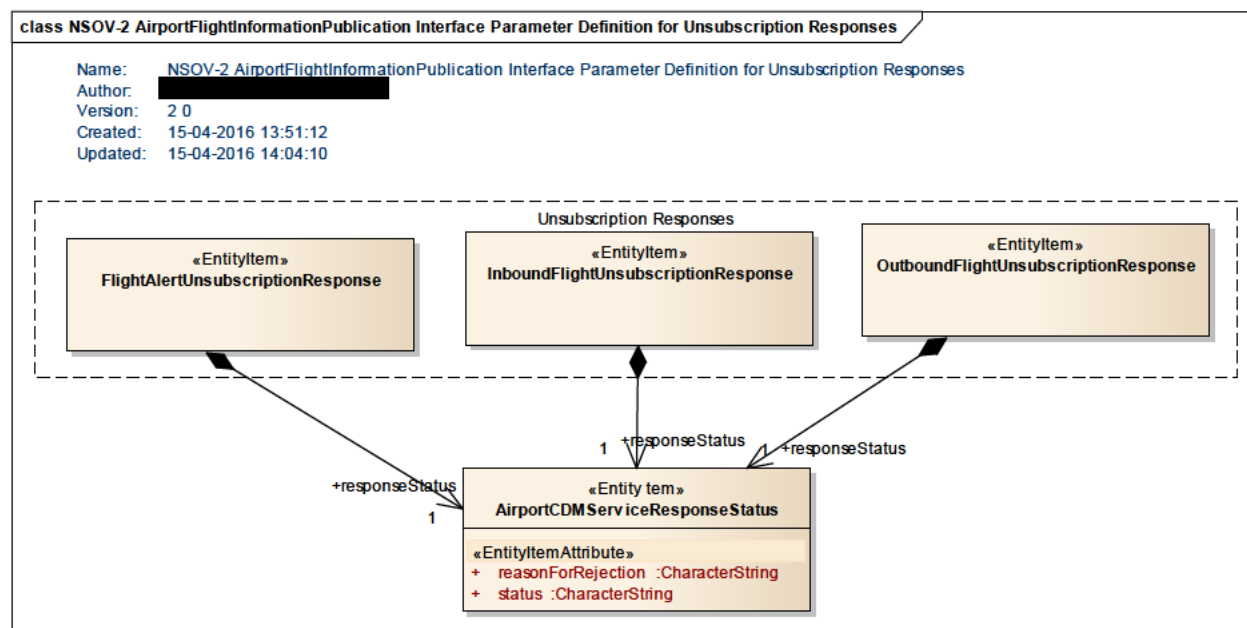


Figure 16: NSOV-2 *AirportFlightInformationPublication* Interface Parameter Definition for Unsubscription Responses

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.1.5 Operation unsubscribeInboundFlight

5.1.1.5.1 Operation Functionality

The *unsubscribeInboundFlight* Service Interface Operation receives subscription requests for inbound flight publications filtered to the specification of the request. The operation returns a confirmation of the validity of such subscription request taking into account local business rules in accordance with the provision of the Service Level Agreement ratified by all the A-CDM partners within the airport.

5.1.1.5.2 Operation Parameters

The operation requires one input parameter: *InboundFlightSubscriptionRequest* message. After the operation is processed, the service provides an output parameter: *InboundFlightSubscriptionResponse*.

See diagrams in Figure 15: NSOV-2 *AirportFlightInformationPublication* Interface Parameter Definition for Unsubscription Requests and Figure 16: NSOV-2 *AirportFlightInformationPublication* Interface Parameter Definition for Unsubscription Responses

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.1.6 Operation unsubscribeOutboundFlight

5.1.1.6.1 Operation Functionality

The *unsubscribeOutboundFlight* Service Interface Operation receives unsubscription requests of subscribers to outbound flight publications. The operation returns a confirmation of the validity of such unsubscription.

5.1.1.6.2 Operation Parameters

The operation requires one input parameter: *OutboundFlightUnsubscriptionRequest* message. After the operation is processed, the service provides an output parameter: *OutboundFlightUnsubscriptionResponse*.

See diagrams in Figure 15: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for Unsubscription Requests and Figure 16: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for Unsubscription Responses

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.2 Service Interface Definition

AirportFlightInformationSubscriber

The *AirportFlightInformationSubscriber* interface provides means to:

- Publish flight alert information to subscribers, though the *publishFlightAlert* service interface operation.
- Publish inbound flight information to subscribers, through the *publishInboundFlight* service interface operation.
- Publish outbound flight information to subscribers, through the *publishOutboundFlight* service interface operation.

The publication always contains the full message, even when a single data element is changed.

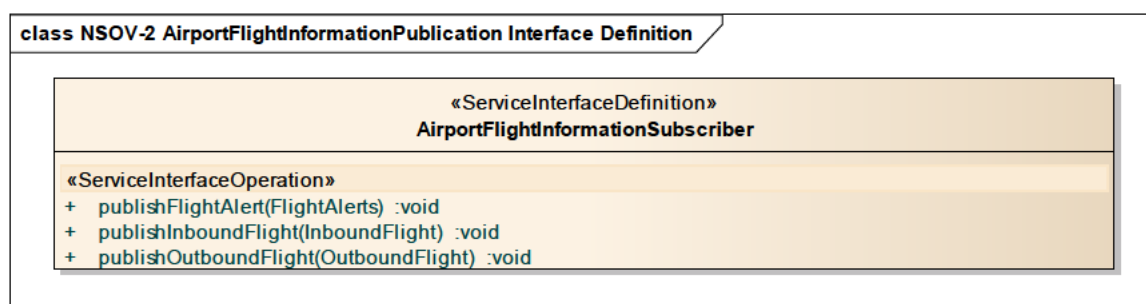


Figure 17: *AirportFlightInformationSubscriber* Service Interface Definition

5.1.2.1 Operation publishFlightAlert

5.1.2.1.1 Operation Functionality

The *publishFlightAlert* Service Interface Operation receives the flight alerts for a specific flight.

5.1.2.1.2 Operation Parameters

The operation requires one input parameter: *FlightAlerts* message; and does not return any message as output parameter.

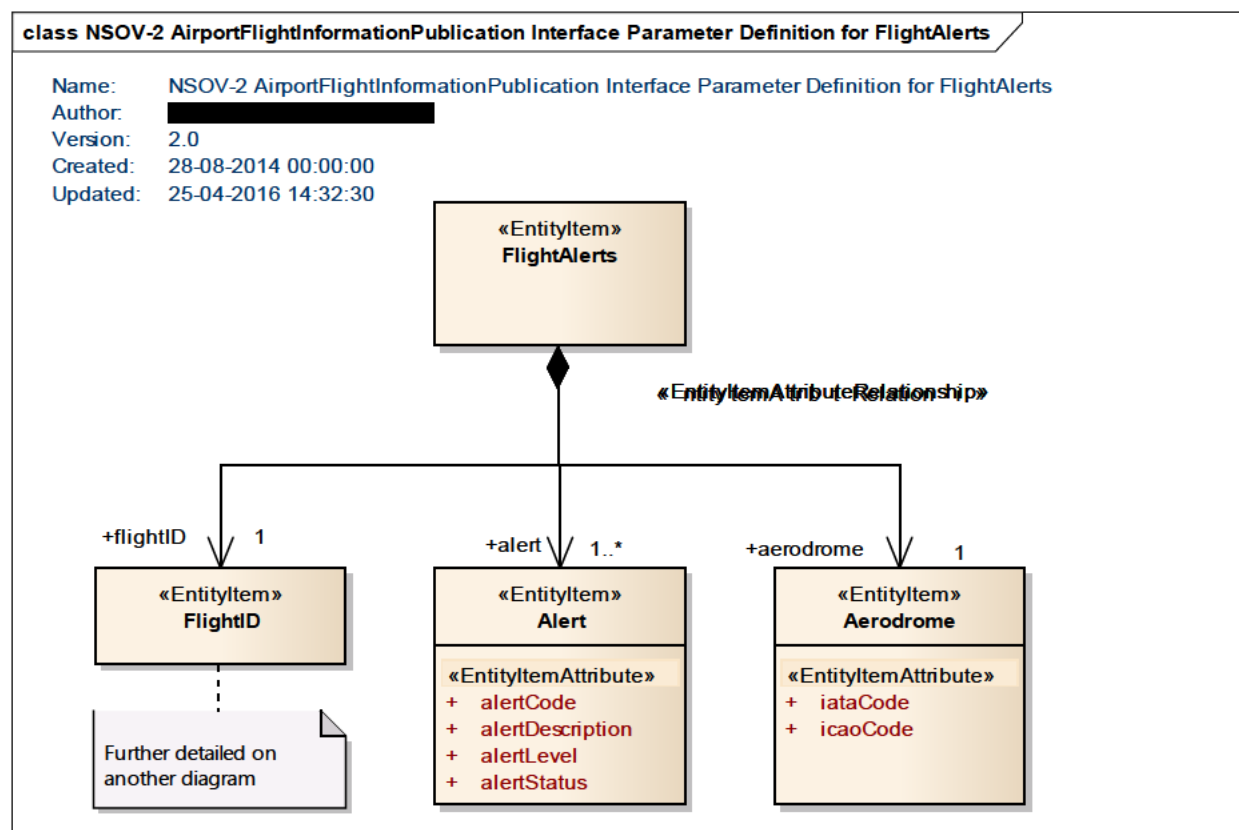


Figure 18: NSOV-2 *AirportFlightInformationPublication* Interface Parameter Definition for FlightAlerts

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.2.2 Operation *publishInboundFlight*

5.1.2.2.1 Operation Functionality

The *publishInboundFlight* Service Interface Operation receives the A-CDM information published for a flight arriving at an aerodrome.

5.1.2.2.2 Operation Parameters

The operation requires one input parameter: *InboundFlight* message; and does not return any message as output parameter.

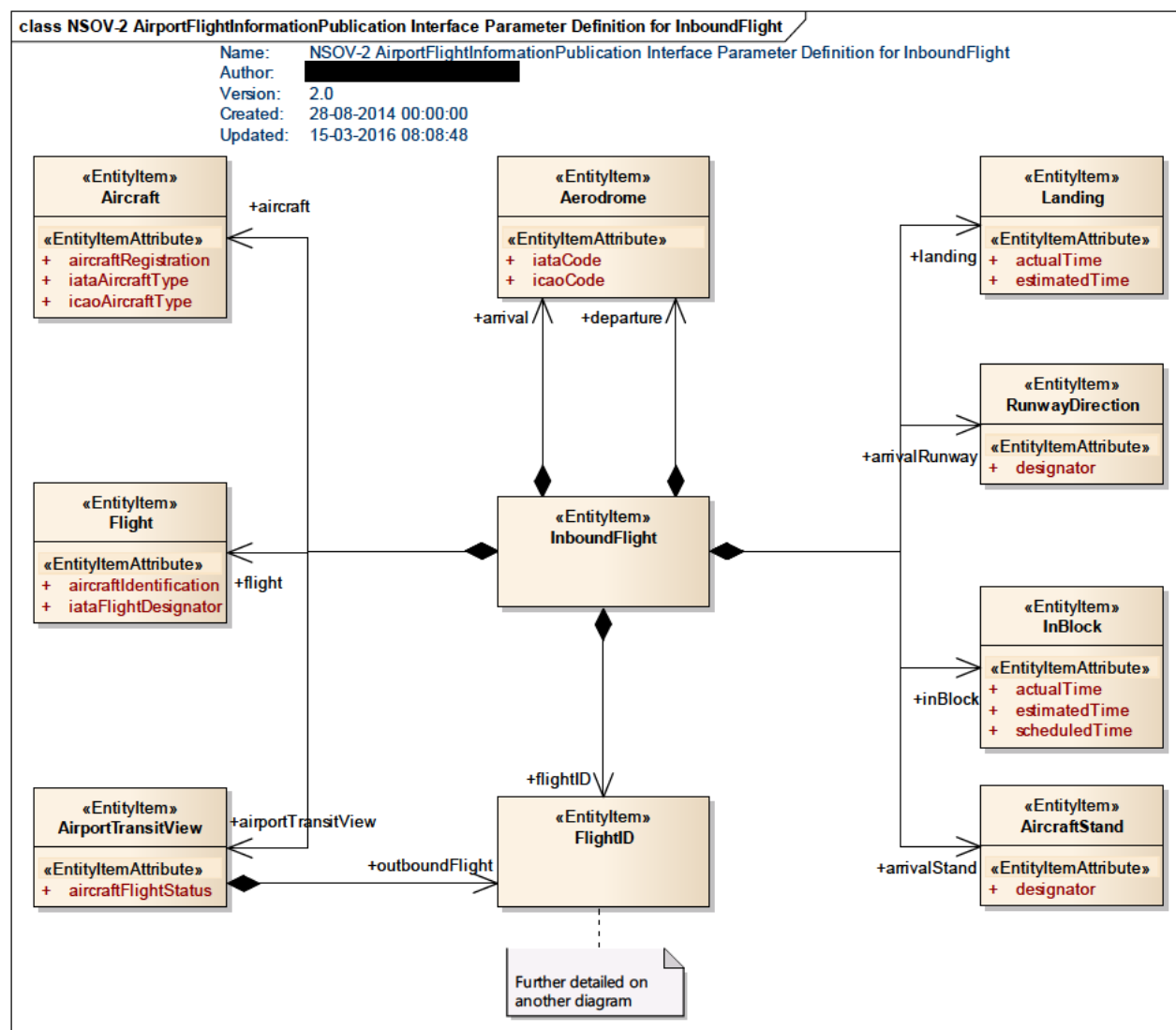


Figure 19: NSOV-2 *AirportFlightInformationPublication* Interface Parameter Definition for *InboundFlight*

The service interface parameters are further explained in section 5.2 Service Payload.

5.1.2.3 Operation *publishOutboundFlight*

5.1.2.3.1 Operation Functionality

The *publishOutboundFlight* Service Interface Operation receives an outbound flight publication for a specific flight.

5.1.2.3.2 Operation Parameters

The operation only requires one input parameter: *OutboundFlight* message; does not return any message as output parameter.

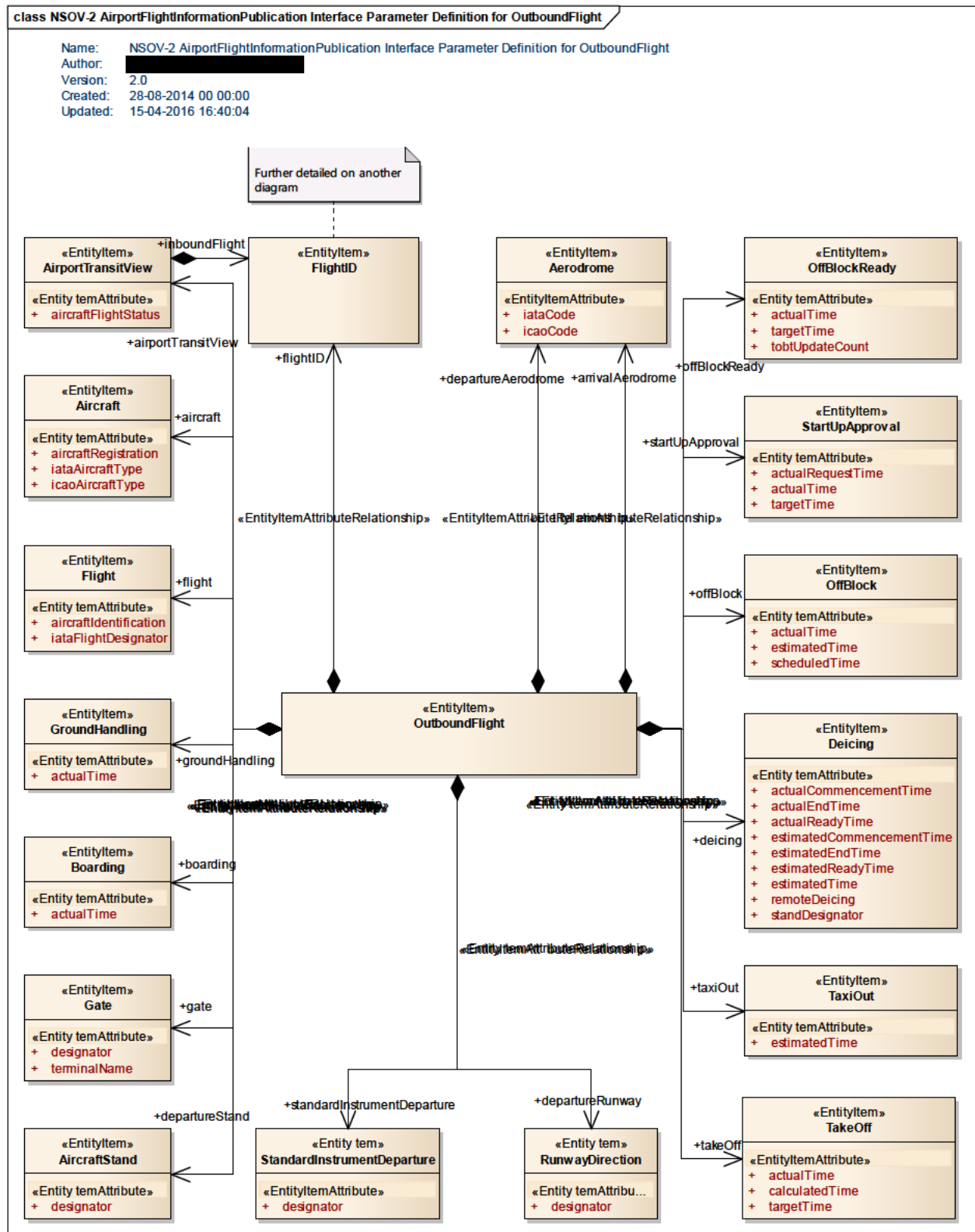


Figure 20: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for OutboundFlight

The service interface parameters are further explained in section 5.2 Service Payload.

5.2 Service Payload

5.2.1 Payload elements specific to this service

Element Name	Author	Notes
Aerodrome		General structure that allows ICAO Aerodrome Location Indicator or IATA Aerodrome Designator. Both can coexist.
	Element Tagged Value Name	Value
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Aerodrome
Attribute Name	Type	Notes
iataCode		IATA Aerodrome Designator.
	Tagged Value Name	Value
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Aerodrome@designatorIATA
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:AerodromeIATADES ignator
Attribute Name	Type	Notes
icaoCode		ICAO Aerodrome Location Indicator.
	Tagged Value Name	Value
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Aerodrome@locationIndicatorICAO
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:BaseInfrastructure:CommunicationInfrastructure:AerodromeLocationIndicator
Element Name	Author	Notes
Aircraft		General structure for aircraft information.
	Element Tagged Value Name	Value
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Aircraft:Aircraft
Attribute Name	Type	Notes
aircraftRegistration		The registration markings of the aircraft, if different from the aircraft identification in the ICAO Flight Plan Item7.
	Tagged Value Name	Value
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Aircraft:Aircraft@aircraftRegistration
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Aircraft:AircraftRegistration
Attribute Name	Type	Notes

	iataAircraftType		IATA code used to identify the aircraft type linked to the Business trajectory.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Aircraft:AircraftType@iataIdentifier	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Aircraft:IATAAircraftTypeCode	
	Attribute Name	Type	Notes
	icaoAircraftType		ICAO code used to identify the aircraft type linked to the Business trajectory.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Aircraft:AircraftType@icaoIdentifier	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Aircraft:ICAOAircraftTypeCode	
Element Name	Author	Notes	
AircraftStand		A designated area of an apron intended to be used for parking an aircraft.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:AircraftStand	
	Attribute Name	Type	Notes
	designator		The textual designator of the stand.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:AircraftStand@designator	
Element Name	Author	Notes	
Airline		As provided in Article 96 of the Convention any air transport enterprise offering a scheduled international air service.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Stakeholders:Stakeholder:AircraftOperator	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Stakeholders:Organisation:Airline	
	Attribute Name	Type	Notes
	iataCode		The designator of an airline assigned by IATA in accordance with the provision of Resolution 762.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Stakeholders:Stakeholder:AircraftOperator@designatorIATA	
	Attribute Name	Type	Notes
	icaoCode		The designator of an airline assigned by ICAO

			in accordance with ICAO Document 8585
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Stakeholders:Stakeholder:AircraftOperator@designatorICAO	
Element Name	Author	Notes	
AirportFlightInformationSubscription		General structure for subscribing to an A-CDM service publications that allows different subscription parameters that can coexist.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes	
AirportFlightInformationUnsubscription		General structure for unsubscribing from an A-CDM service publication. This is a special case where the logical payload is actually empty at logical level, as it was decided by WP8 & WP14 in the FT10 Design workshop to omit the subscription id, which is often very technology dependent. And so we have a logical payload that is empty and that is not part of an existing exchange standard.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	CLDM_out_of_scope	
	IMDefinitionTrace	Out_of_scope	
Element Name	Author	Notes	
AirportTransitView		The path and operations linked to an aircraft during its "visit" to the airport. It starts at the initial approach fix (STAR) and include the taxi-in segment, the turn round processes from the airspace user, the taxi-out segment and ends with the handover to the TMA departure controller at the SID.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:AirportTransitView:AirportTransitView	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:AirportTransitView:AirportTransitView	
	Attribute Name	Type	Notes
	aircraftFlightStatus		Status of an aircraft at an aerodrome combining information about the outbound flight, the inbound flight and the turnaround process. Values: SCH Scheduled INI Initiated AIR Airborne FIR Flight entered local FIR FNL Final ARR Arrival

			IBK In-Block BRD Boarding RDY Ready OBK Off-Block RDI Ready for de-icing DEI De-icing in progress DEP Departed The values are listed in their usual order.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:AirportTransitView:AirportTransitView@aircraftFlightStatus	
Element Name	Author	Notes	
Alert		A system generated message which alerts the Airport CDM Partners of an irregularity and which normally requires one or more partners to make a manual intervention to resolve the irregularity [A-CDM Impl.].	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:ACDMIrregularity	
	Attribute Name	Type	Notes
	alertCode		Code of the A-CDM alert as defined in the A-CDM Implementation Manual.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:ACDMIrregularity@type	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:ACDMIrregularityType	
	Attribute Name	Type	Notes
	alertDescription		Short textual description of the A-CDM alert as defined in the A-CDM Implementation Manual.
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:Abstract:Entity@annotation	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:Abstract:LinguisticNote@note	
	Attribute Name	Type	Notes
	alertLevel		Describes the kind of the A-CDM alert, such as WARNING or ALERT.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Stakeholders:BusinessService:Alert@severityLevel	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Stake	

		holders:OrganisationRoleAndService:AlertSeverityLevel	
Attribute Name	Type	Notes	
alertStatus		Specifies whether the alert stills applicable or not.	
Tagged Value Name	Value		
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Stakeholders:BusinessService:Alert@activationStatus		
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Stakeholders:OrganisationRoleAndService:AlertStatus		
Element Name	Author	Notes	
Boarding		The act of embarking on an aircraft.	
Element Tagged Value Name	Value		
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:Boarding		
Attribute Name	Type	Notes	
actualTime		ASBT (Actual Start Boarding Time): time that passengers are entering the bridge or bus to the aircraft.	
Tagged Value Name	Value		
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL		
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:Boarding@startTime		
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:ActualStartBoardingTime		
Element Name	Author	Notes	
Deicing		De-icing operation on an aircraft that may consist of removal of snow, ice or frost from the aircraft (de-icing), and/or also application of chemicals that remain on a surface and continue to delay the reformation of ice up (anti-icing).	
Element Tagged Value Name	Value		
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing		
Attribute Name	Type	Notes	
actualCommencementTime		ACZT (Actual Commencement of De-icing Time): the time when de-icing operations on an aircraft starts.	
Tagged Value Name	Value		
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL		

		ctFields:Common:Codelists:CodePlanningStatusType@ACTUAL
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@commencementOfDeicing
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:ActualCommencementOfDeicingTime
Attribute Name	Type	Notes
actualEndTime		AEZT (Actual End of De-icing Time): the time when de-icing operations on an aircraft ends.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@endOfDeicing	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:ActualEndOfDeicingTime	
Attribute Name	Type	Notes
actualReadyTime		ARZT (Actual Ready for De-icing Time): the time when the aircraft is ready to be de-iced.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@readyForDeicing	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:ActualReadyForDeicingTime	
Attribute Name	Type	Notes
estimatedCommencementTime		ECZT (Estimated Commencement of De-icing Time): the estimated time when de-icing operations on an aircraft are expected to start.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@commencementOfDeicing	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirT	

		rafficOperations:AerodromeOperations:Deicing:EstimatedCommencementOfDeicingTime
Attribute Name	Type	Notes
estimatedEndTime		EEZT (Estimated End of De-icing Time): the estimated time when de-icing operations on an aircraft are expected to end.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@endOfDeicing	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:EstimatedEndOfDeicingTime	
Attribute Name	Type	Notes
estimatedReadyTime		ERZT (Estimated Ready for De-icing Time): the estimated time when the aircraft is expected to be ready for de-icing operations.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@readyForDeicing	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:EstimatedReadyForDeicingTime	
Attribute Name	Type	Notes
estimatedTime		EDIT (Estimated De-icing Time): metric EEZT - ECZT.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@deicingDuration	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:EstimatedDeicingTime	
Attribute Name	Type	Notes
remoteDeicing		Indicates whether the de-icing is executed on stand of the parking position or not. Values: ONSTAND

			REMOTE
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@deicingPlace	
	Attribute Name	Type	Notes
	standDesignator		Designator of the stand position where the deicing operations occur.
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Deicing:Deicing@areaForDeicing	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:DeicingArea@standLocation	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:AircraftStand@designator	
Element Name	Author	Notes	
Flight		General structure for flight designator information.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:Flight	
	Attribute Name	Type	Notes
	aircraftIdentification		A group of letters, figures or a combination thereof which is either identical to, or coded equivalent of, the aircraft call sign to be used in air-ground communications, and which is used to identify the aircraft in ground-ground air traffic services communications.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:AircraftIdentification	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:AircraftIdentification	
	Attribute Name	Type	Notes
	iataFlightDesignator		Identifier of one or several consecutive IATA flight leg(s) operated by an airline.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:FlightDesignator	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:FlightDesignator	
Element Name	Author	Notes	

FlightAlertSubscriptionRequest		Subscription request for A-CDM flight Alerts.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes	
FlightAlertSubscriptionResponse		Subscription response for A-CDM flight Alerts.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes	
FlightAlertUnsubscriptionRequest		A request to unsubscribe from A-CDM flight alerts publication.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes	
FlightAlertUnsubscriptionResponse		A response of an unsubscription from A-CDM flight alerts publication.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes	
FlightAlerts		A publication containing A-CDM flight Alerts information.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes	
Gate		Access to an airport terminal on the passenger side, considered in relation with a specific StandSystemConfiguration, i.e. at some point in time for a specific airport.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Gate	
	Attribute Name	Type	Notes
	designator		Common gate name.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Gate@designator	
	Attribute Name	Type	Notes
	terminalName		Terminal name where the gate is located.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Terminal@designator	
Element Name	Author	Notes	
GroundHandling		Services necessary for an aircraft arrival at, and departure from an airport, other than air traffic services.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:S	

		subjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:GroundHandling
Attribute Name	Type	Notes
actualTime		ACGT (Actual Commence of Ground Handling Time): the time when ground handling on an aircraft starts, can be equal to AIBT (to be determined locally).
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:GroundHandling@startTime	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AerodromeOperations:Turnaround:ActualCommenceOfGroundHandlingTime	
Element Name	Author	Notes
InBlock		The arrival of the aircraft to its parking position.
Element Tagged Value Name	Value	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:InBlock	
Attribute Name	Type	Notes
actualTime		AIBT (Actual In-Block Time): the time that an aircraft arrives in-blocks. (Equivalent to Airline/Handler ATA - Actual Time of Arrival, ACARS=IN).
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:InBlock@time	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:ActualInBlockTime	
Attribute Name	Type	Notes
estimatedTime		EIBT (Estimated In-Block Time): the estimated time that an aircraft will arrive in-blocks. (Equivalent to Airline/Handler ETA - Estimated Time of Arrival).
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:InBlock@time	
IMDefinitionTrace	urn:x-	

		ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:EstimatedInBlockTime
Attribute Name	Type	Notes
scheduledTime		SIBT (Scheduled In-Block Time): the time that an aircraft is scheduled to arrive at its parking position.
Tagged Value Name	Value	
CLDMContextTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@SCH EDULED	
CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:InBlock@time	
IMDefinitionTrace	urn:x-ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:ScheduledInBlockTime	
Element Name	Author	Notes
InboundFlight		A publication of information of an inbound flight.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes
InboundFlightSubscriptionRequest		A request to subscribe for inbound flight information publications.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes
InboundFlightSubscriptionResponse		A response to subscription for inbound flight information publications.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes
InboundFlightUnsubscriptionRequest		A request to unsubscribe from inbound flight information publications.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes
InboundFlightUnsubscriptionResponse		A response to unsubscribe from inbound flight information publications.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes
Landing		The phase of flight from the point of transition from nose-low to nose-up attitude, immediately before landing (flare), through touchdown and until aircraft exists landing runway or comes to a stop, whichever occurs first.
Element Tagged Value Name	Value	
CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:Landing	
Attribute Name	Type	Notes
actualTime		ALDT (Actual Landing Time): the time that an aircraft lands on a runway. (Equivalent to ATC

			ATA - Actual Time of Arrival = landing, ACARS=ON).
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:Landing@time	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:ActualLandingTime	
	Attribute Name	Type	Notes
	estimatedTime		ELDT (Estimated Landing Time): the estimated time that an aircraft will touchdown on the runway. (Equivalent to ATC ETA - Estimated Time of Arrival = landing).
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:Landing@time	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:EstimatedLandingTime	
Element Name	Author	Notes	
OffBlock		The departure of the aircraft from its parking position.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlock	
	Attribute Name	Type	Notes
	actualTime		AOBT (Actual Off-Block Time): time the aircraft pushes back / vacates the parking position. (Equivalent to Airline / Ground Handlers ATD - Actual Time of Departure & ACARS=OUT).
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlock@time	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:ActualOffBlockTime	
	Attribute Name	Type	Notes
	estimatedTime		EOBT (Estimated Off-Block Time): the estimated time at which the aircraft will start movement associated with departure (ICAO).

	Tagged Value Name	Value
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlock@time
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:EstimatedOffBlockTime
Attribute Name	Type	Notes
scheduledTime		SOBT (Scheduled Off-Block Time): the time that an aircraft is scheduled to depart from its parking position.
	Tagged Value Name	Value
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@SCHEDULED
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlock@time
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:ScheduledOffBlockTime
Element Name	Author	Notes
OutboundFlight		A publication of information of an outbound flight.
	Element Tagged Value Name	Value
	CLDMSemanticTrace	CLDM_out_of_scope
Element Name	Author	Notes
OutboundFlightSubscriptionRequest		A request to subscribe for outbound flight information publications.
	Element Tagged Value Name	Value
	CLDMSemanticTrace	CLDM_out_of_scope
Element Name	Author	Notes
OutboundFlightSubscriptionResponse		A response to subscribe for outbound flight information publications.
	Element Tagged Value Name	Value
	CLDMSemanticTrace	CLDM_out_of_scope
Element Name	Author	Notes
OutboundFlightUnsubscriptionRequest		A request to unsubscribe from outbound flight information publications.
	Element Tagged Value Name	Value
	CLDMSemanticTrace	CLDM_out_of_scope
Element Name	Author	Notes
OutboundFlightUnsubscriptionResponse		A response to unsubscribe from outbound flight information publications.
	Element Tagged Value Name	Value
	CLDMSemanticTrace	CLDM_out_of_scope
Element Name	Author	Notes
RunwayDirection		One of the two possible landing and/or take-off directions of a runway or Final Approach and Take-off Area (FATO).
	Element Tagged Value Name	Value

	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:RunwayDirection	
	Attribute Name	Type	Notes
	designator		The full textual designator of the landing and take-off direction.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:RunwayDirection@designator	
Element Name	Author	Notes	
StandardInstrumentDeparture		A designated instrument flight rule (IFR) departure route linking the aerodrome or a specified runway of the aerodrome with a specified significant point, normally on a designated ATS route, at which the en-route phase of a flight commences.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirspaceInfrastructure:RouteAndProcedure:StandardInstrumentDeparture	
	Attribute Name	Type	Notes
	designator		Standard Instrument Departure designator.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirspaceInfrastructure:RouteAndProcedure:StandardInstrumentDeparture@designator	
Element Name	Author	Notes	
TaxiOut		Phase of flight from Off-Block until Take-Off, that includes the Surface Movement associated to the departure of a flight.	
	Element Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:Codelists:CodeFlightPhaseType@TAXI_OUT_PHASE	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightPhase:FlightPhase	
	Attribute Name	Type	Notes
	estimatedTime		EXOT (Estimated Taxi-Out Time): the estimated taxi time between off-block and take off. This estimate includes any buffer time at holding point or remote de-icing prior to take off.
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightPhase:FlightPhase	

		ctFields:Flight:FlightPhase:FlightPhase@duration
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightPhase:EstimatedTaxiOutTime
Element Name	Author	Notes
TimeWindow		Time period, between the date and time of the start and the end.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
Attribute Name	Type	Notes
from	DateTime	Date and time at which the time window period starts.
Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out of scope	
Attribute Name	Type	Notes
to	DateTime	Date and time at which the time window period ends
Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out of scope	

Table 3: Specific Payload elements with tracing to AIRM

5.2.2 Payload elements common to several AirportCDM services

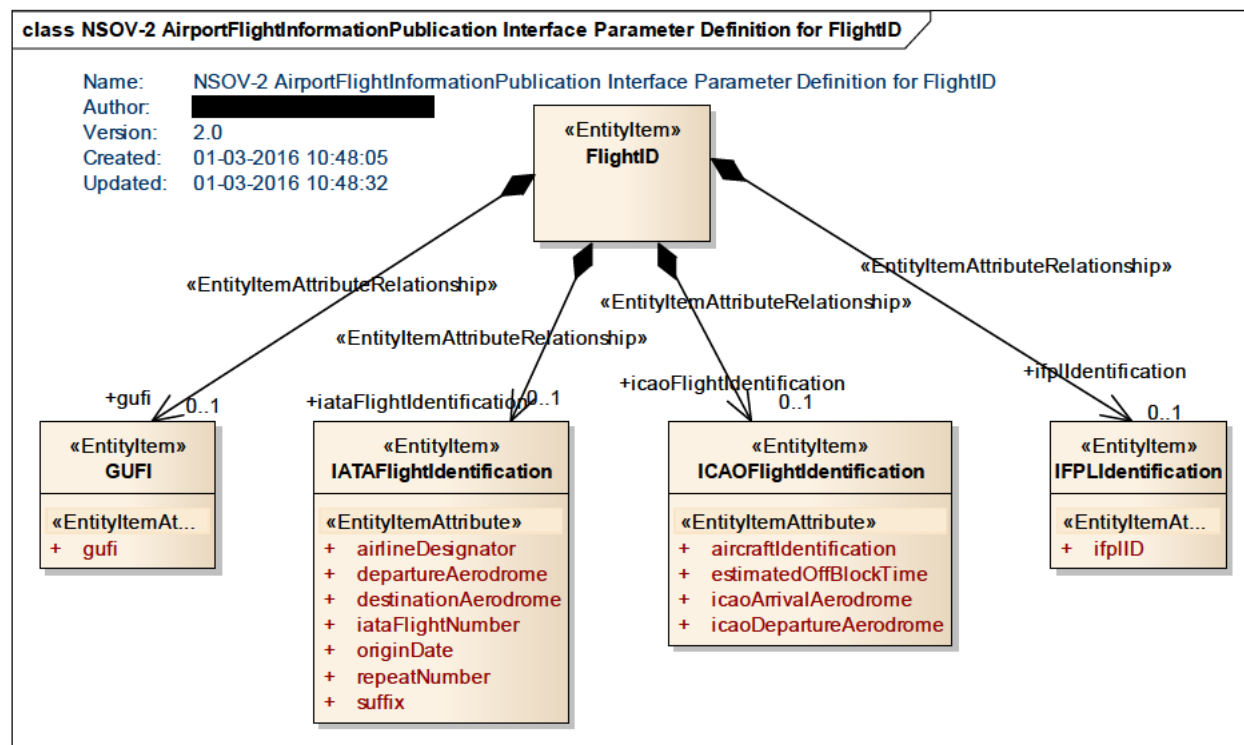


Figure 21: NSOV-2 AirportFlightInformationPublication Interface Parameter Definition for FlightID

Element Name	Author	Notes
AirportCDMServiceResponseStatus	██████████	General structure of responses of an A-CDM service.
Element Tagged Value Name		Value
CLDMSemanticTrace		CLDM_out_of_scope
Attribute Name	Type	Notes
reasonForRejection	CharacterString	Specifies briefly the reason of rejection of the related request.
Tagged Value Name		Value
CLDMSemanticTrace		CLDM_out of scope
Attribute Name	Type	Notes
status	CharacterString	Specifies whether the related request has been accepted or not. Values: <ul style="list-style-type: none"> ACCEPTED REJECTED
Tagged Value Name		Value
CLDMSemanticTrace		CLDM out of scope
Element Name	Author	Notes
FlightID	██████████	General structure to allow different flight identifiers. Many identifiers can coexist.
Element Tagged Value Name		Value

	CLDMSemanticTrace	CLDM_out_of_scope	
Element Name	Author	Notes	
GUFI		Globally Unique Flight Identifier.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:Flight@globallyUniqueFlightIdentifier	
	Attribute Name	Type	Notes
	gufi		A reference that uniquely identifies a specific flight and that is independent of any particular system.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:Flight@globallyUniqueFlightIdentifier	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:GloballyUniqueFlightIdentifier	
Element Name	Author	Notes	
IATAFlightIdentification		Flight identification structure as defined by IATA, also known as UFI (Unique Flight Identifier).	
	Element Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Stakeholders:Stakeholder:AircraftOperator@designatorICAO	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier	
	Attribute Name	Type	Notes
	airlineDesignator		Code of the aircraft operator of the identified flight, usually IATA but it can be ICAO, as defined in the Schedule [AIDX, UFI].
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier@flightDesignator	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Stakeholders:Stakeholder:AircraftOperator@designatorIATA	
	Attribute Name	Type	Notes
	departureAerodrome		Code of scheduled departure airport usually IATA bur can be ICAO or other as defined in the Scheduled [AIDX, UFI].
	Tagged Value Name	Value	

	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier@adep	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Aerodrome@designatorIATA	
	Attribute Name	Type	Notes
	destinationAerodrome		Code of scheduled arrival airport usually IATA but can be ICAO or other as defined in the Schedule [AIDX, UFI].
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier@ades	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Aerodrome@designatorIATA	
	Attribute Name	Type	Notes
	iataFlightNumber		IATA flight number of the identified flight as defined in the Schedule [AIDX, UFI].
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier@flightDesignator	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:FlightDesignator@flightNumber	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:IATAFlightNumber	
	Attribute Name	Type	Notes
	originDate		Scheduled flight origin date based on the flight as defined in the Schedule [AIDX, UFI].
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier@originFlightDate	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:OriginFlightDate	
	Attribute Name	Type	Notes
	repeatNumber		Repeat or departure attempt.
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:IATAUniqueFlightIdentifier@repeatNumber	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:RepeatNumber	

Attribute Name	Type	Notes
suffix		suffix of the repeatNumber as defined in the Schedule [AIDX, UFI].
Tagged Value Name	Value	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:FlightDesignator@suffix	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:FlightDesignatorSuffix	
Element Name	Author	Notes
ICAOFlightIdentification		Flight identification structure based on usual ICAO fields present in the Flight Plan.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightIdentifier:ICAOFlightID	
Attribute Name	Type	Notes
aircraftIdentification		Name used by ATS units to identify and communicate with the aircraft.
Tagged Value Name	Value	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightIdentifier:AircraftIdentification	
Attribute Name	Type	Notes
estimatedOffBlockTime		Date and time at which the aircraft will off-block according to ICAO flight plan field.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ESTIMATED	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlock@time	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:EstimatedOffBlockTime	
Attribute Name	Type	Notes
icaoArrivalAerodrome		ICAO code of scheduled destination aerodrome.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:Flight@destinationAerodrome	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Aerodrome@locationIndicatorICAO	
Attribute Name	Type	Notes
icaoDepartureAerodrome		ICAO code of the scheduled departure aerodrome.
Tagged Value Name	Value	

	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:Flight@departureAerodrome
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:BaseInfrastructure:AerodromeInfrastructure:Aerodrome@locationIndicatorICAO
Element Name	Author	Notes
IFPLIdentification		Flight identification based on a unique identifier assigned to a flight plan.
Element Tagged Value Name	Value	
CLDMSemanticTrace	CLDM_out_of_scope	
Attribute Name	Type	Notes
ifplID		Unique identifier of a flight plan once is submitted to the IFPS (Initial integrated Flight Processing System). The identifier is assigned by IFPS.
Tagged Value Name	Value	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:Flight@ifplIdentifier	
Element Name	Author	Notes
OffBlockReady		Event at which all doors of an aircraft are closed and departure will be possible immediately after reception of the ATC clearance.
Element Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:DepartureOperations@offBlockReady	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlockReady	
Attribute Name	Type	Notes
actualTime		ARDT (Actual Ready Time): when the aircraft is ready for start up / push back or taxi immediately after clearance delivery, meeting the requirements set by the TOBT definition.
Tagged Value Name	Value	
CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlockReady@time	
IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:ActualReadyTime	
Attribute Name	Type	Notes

	targetTime		TOBT (Target Off-Block Time): the time that an operator / handling agent estimates that an aircraft will be ready, all doors closed, boarding bridge removed, push back vehicle present, ready to start up / push back immediately upon reception of clearance from the TWR. TOBT can be calculated as ELDT+EXIT+MTTT or ALDT+EXIT+MTTT or AIBT+MTTT. If TOBT is earlier than EOBT, then EOBT value is displayed as TOBT, until updated / confirmed by the Aircraft Operator or Ground Handler. Confirmation can also be triggered automatically based on a time parameter before TOBT.
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@TARGET	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlockReady@time	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:TargetOffBlockTime	
	Attribute Name	Type	Notes
	tobtUpdateCount		The number of updated to TOBT after TSAT has been issued (eg. max 3 updates after TSAT issue).
	Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:OffBlockReady@tobtUpdateCount	
	Element Name	Author	Notes
	StartUpApproval		ATC approval for starting up of the aircraft engines by the flight crew.
	Element Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:AerodromeOperations:DepartureOperations@startUpApproval	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:ATMServiceDeliveryManagement:StartUpClearance	
	Attribute Name	Type	Notes
	actualRequestTime		ASRT (Actual Start Up Request Time): time the pilot requests start up clearance.
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	

	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:ATMServiceDeliveryManagement:StartupClearance@startupApprovalRequestTime	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:AirspaceUserOperations:ActualStartupRequestTime	
	Attribute Name	Type	Notes
	actualTime		ASAT (Actual Start Up Approval Time): time that an aircraft receives its start up approval.
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:ATMServiceDeliveryManagement:StartupClearance@time	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:ATMServiceDeliveryManagement:ActualStartupApprovalTime	
	Attribute Name	Type	Notes
	targetTime		TSAT (Target Start Up Approval Time): the time provided by ATC taking into account TOBT, CTOT and/or the traffic situation that an aircraft can expect receive start up / push back approval.
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@TARGET	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:AirTrafficOperations:ATMServiceDeliveryManagement:StartupClearance@time	
	IMDefinitionTrace	urn:x- ses:sesarju:airm:v410:InformationModel:SubjectFields:AirTrafficOperations:ATMServiceDeliveryManagement:TargetStartupApprovalTime	
Element Name	Author	Notes	
TakeOff		The phase of the flight from the application of take-off power until reaching the first prescribed power reduction, or until reaching the vfr pattern or 1,500 feet (450 metres) above runway and elevation, whichever comes first or the termination (abort) of the take-off.	
	Element Tagged Value Name	Value	
	CLDMSemanticTrace	urn:x- ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:TakeOff	
	Attribute Name	Type	Notes

	actualTime		ATOT (Actual Take-Off Time): the time that an aircraft takes off from the runway (Equivalent to ATC ATD - Actual Time of Departure, ACARS=OFF).
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@ACTUAL	
	CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:TakeOff@time	
	IMDefinitionTrace	urn:x-ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:ActualTakeOffTime	
	Attribute Name	Type	Notes
	calculatedTime		CTOT (Calculated Take Off Time): a time calculated and issued by the appropriate Central Management unit, as a result of tactical slot allocation, at which a flight is expected to become airborne. (ICAO Doc 7030/4 - EUR, Table 7).
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@CALCULATED	
	CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:TakeOff@time	
	IMDefinitionTrace	urn:x-ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:CalculatedTakeOffTime	
	Attribute Name	Type	Notes
	targetTime		TTOT (Target Take Off Time): the Target Take Off Time taking into account the TOBT/TSAT plus the EXOT (Estimated Taxi-Out Time).
	Tagged Value Name	Value	
	CLDMContextTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Common:Codelists:CodePlanningStatusType@TARGET	
	CLDMSemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel:SubjectFields:Flight:FlightEvent:TakeOff@time	
	IMDefinitionTrace	urn:x-ses:sesarju:airm:v410:InformationModel:SubjectFields:Flight:FlightEvent:TargetTakeOffTime	

Table 4: Common Payload elements with tracing to AIRM

6 Service dynamic behaviour

6.1 Service Interface

AirportFlightInformationPublicationInterface

The *AirportFlightInformationPublication* service supports one MEP: Publish/Subscribe Push. However, in order to provide this complex MEP, it provides Synchronous Request/Response operations for subscription and unsubscription and One-Way operations for publication (asynchronous by definition).

The following diagram describes the interaction between the service consumer and the service concerning flight alert publication:

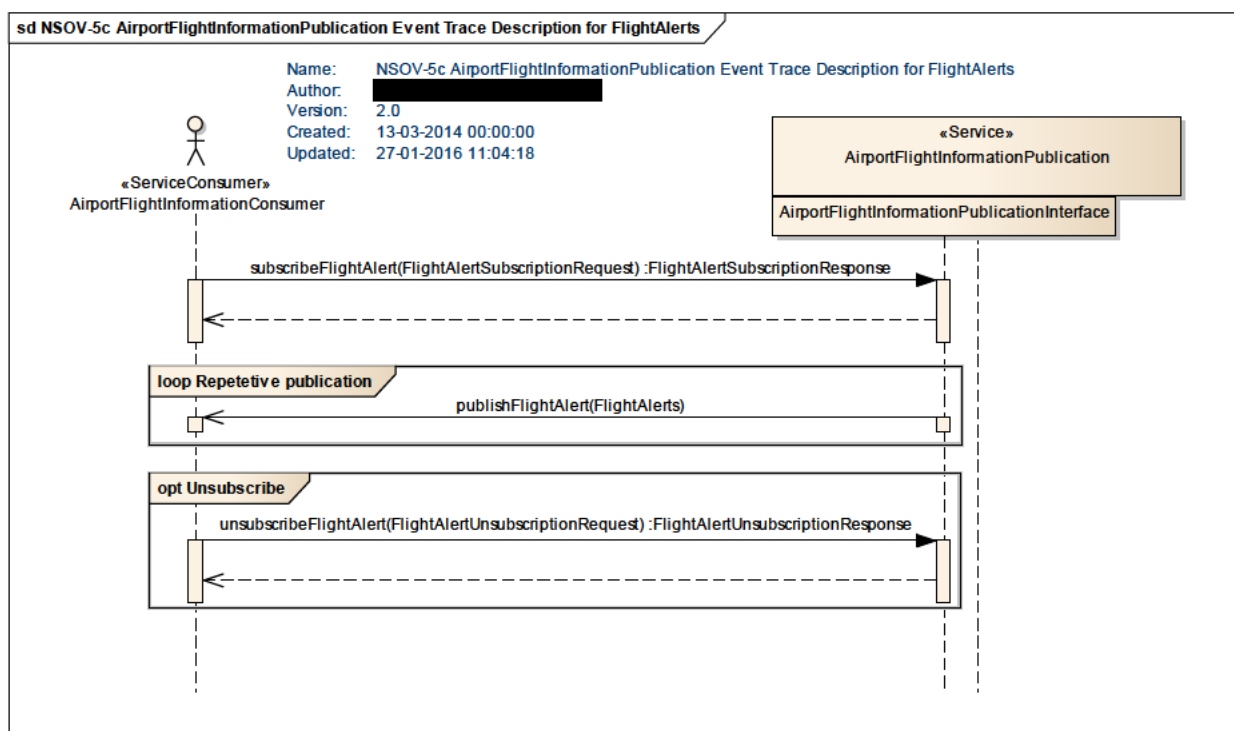


Figure 22: NSOV-5c *AirportFlightInformationPublication* Event Trace Description for FlightAlerts

The following diagram describes the interaction between the service consumer and the service concerning inbound flight publication:

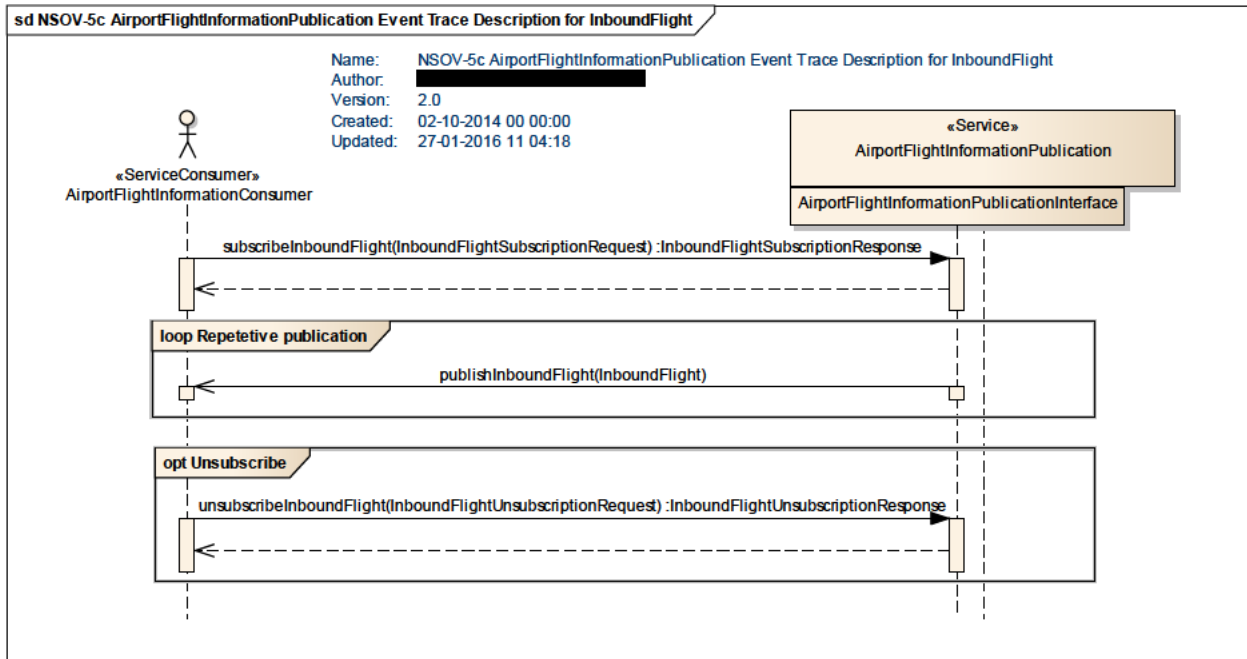


Figure 23: NSOV-5c AirportFlightInformationPublication Event Trace Description for InboundFlight

The following diagram describes the interaction between the service consumer and the service concerning outbound flight publication:

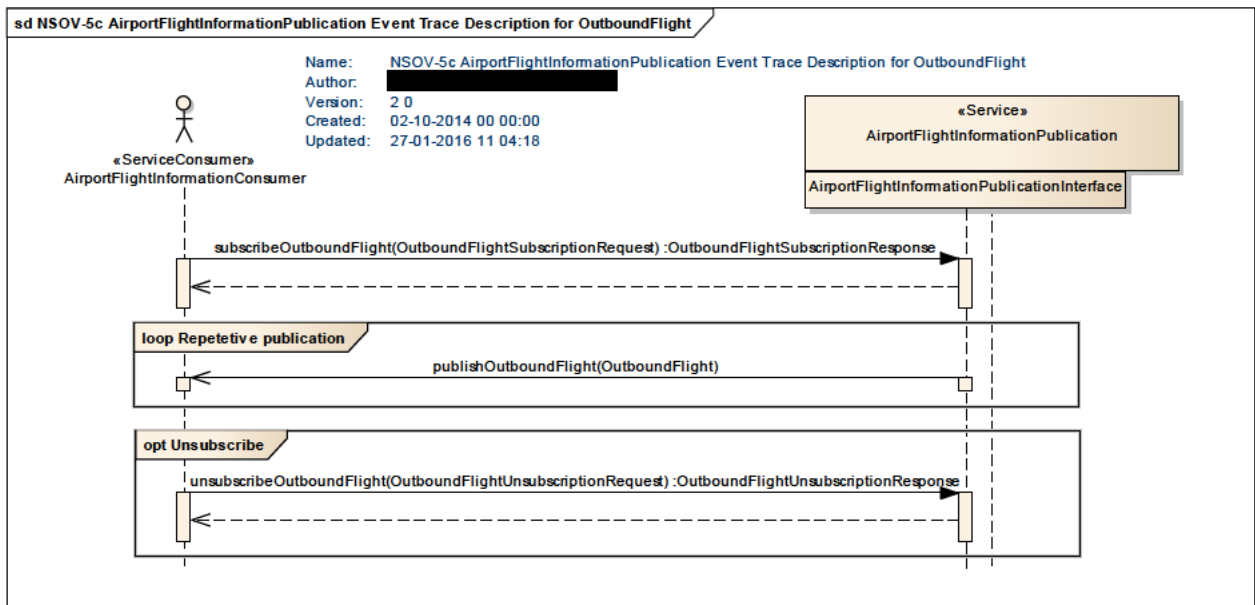


Figure 24: NSOV-5c AirportFlightInformationPublication Event Trace Description for OutboundFlight

7 Service provisioning

The following diagram describes the service provision of the *AirportFlightInformationPublication* service:



Figure 25: NSV-12 AirportFlightInformationPublication Service Provision

The *AirportFlightInformationPublication* service is naturally provided by the ACISP and consumed by the A-CDM Partner System(s).

8 Validation and Verification

8.1 Verification

Verification performed according to the ISRM Rulebook [6] following the ISRM Verification Guidelines [7]. This includes use of verification scripts. Verification is partly automatic, partly semi-automatic and partly manual.

8.1.1 Verification Results

The verification reports for the service can be found in the Verification Reports directory located in the D65 delivery package:

Designed_Services_-_AirportFlightInformationPublication.xls

Designed_Services_-_AirportFlightInformationPublication_Common_Area.xls

Based on the results in the verification reports the service has been successfully verified.

8.2 Validation

This service has been used in Validation Exercise EXE-06.03.01-VP-669 but has not been formally validated.

9 References

Name	Version	Document ID / Location
[1] Project deliverables template	03.00.00	SJU templates & guidelines package, Project deliverables template
[2] SESAR Operational Service and Environment Definition	03.00.00	SJU templates & guidelines package, OSED template
[3] SESAR Safety and Performance Requirements	03.00.00	SJU templates & guidelines package, SPR template
[4] ISRM Tooling Guidelines	00.07.00	08.03.10 D44
[5] ISRM Modelling Guidelines	00.07.00	08.03.10 D44
[6] ISRM Foundation Rulebook	00.07.00	08.03.10 D44
[7] ISRM Verification Guidelines	00.07.00	08.03.10 D44
[8] European ATM Architecture (EATMA) Guidance Material v4	00.04.02	B.04.01 D66
[9] ISRM Service Portfolio	00.08.01	08.03.10 D65
[10] Airport CDM Implementation Manual	V4	http://www.eurocontrol.int/publications/airport-cdm-implementation-manual-version-4
[11] FT10 SID v 0.8	00.00.80	08.03.10 D09
[12] B.4.3 IP1 A-CDM Service Allocation FT-10	00.01.01	B.04.03 IP1
[13] ISRM1.2 Delivery Report	00.01.00	08.03.10 D62

-END OF DOCUMENT-

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