



# ISRM 2.0 Delivery Report

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## **Abstract**

This document represents the deliverable ISRM 2.0 (D65) of project 08.03.10

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None.

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## Executive summary

In ISRM 2.0, a total of 40 services are delivered, of them 38 are new or updated.

The services in the ISRM trace back to corresponding operational requirements. The designed services trace to AIRM for inclusion of information needed for building physical interfaces.

The consolidation of ISRM 2.0 includes verification towards ISRM Foundation Rulebook edition 00.07.00. An extranet link to ISRM Foundation Rulebook edition 00.07.00 is found in section 1.4.

# 1 Introduction

## 1.1 Purpose of the document

This document constitutes the ISRM 2.0 delivery report.

## 1.2 Intended readership

This is a delivery document intended for parties within SJU. It is also interesting for anyone who is interested to learn more about the new or updated services in ISRM 2.0.

## 1.3 Inputs from other projects

The content of this delivery is produced by Fast Tracks and Service Activities involving different projects within WP8 together with members from OPS and SYS projects as well as members from WP14 and WPB. A Fast Track is a working method where members of different SESAR projects work together with a strong collaboration focus to develop service models for ISRM while following the working method on services [1]. A Service Activity is initiated by SCG and is set up in a similar way as a Fast Track. The services in the ISRM are traced back to corresponding operational requirements and, for designed services, also to AIRM for inclusion of information needed for building physical interfaces.

## 1.4 Artefact dependencies

The ISRM v2.0 is depending on the following artefacts:

Artefact	Version	Responsibility	Link
D100 Working Methods on Services Edition 2014	00.05.00	B.04.03	<a href="https://extranet.sesarju.eu/intraprogman/Assessment%20Library/D100%20SESAR%20Working%20Method%20on%20Services%20Edition%202014%2000%2005%2000.doc">https://extranet.sesarju.eu/intraprogman/Assessment%20Library/D100%20SESAR%20Working%20Method%20on%20Services%20Edition%202014%2000%2005%2000.doc</a>
<b>ISRM Foundation package</b>			<a href="https://extranet.sesarju.eu/WP_08/Project_08.03.10/Project%20Plan/Forms/AllItems.aspx?RootFolder=%2fWP%5f08%2fProject%5f08%2e03%2e10%2fProject%20Plan%2fISRM%20Foundation%2000%2e07%2e00&amp;FolderCTID=0x01200065FE45AE47AC8F46B7DAB9B898EA4848&amp;View=%7b2FA257F7%2d920F%2d4DAF%2dAF27%2d1C5440FE917A%7d">https://extranet.sesarju.eu/WP_08/Project_08.03.10/Project%20Plan/Forms/AllItems.aspx?RootFolder=%2fWP%5f08%2fProject%5f08%2e03%2e10%2fProject%20Plan%2fISRM%20Foundation%2000%2e07%2e00&amp;FolderCTID=0x01200065FE45AE47AC8F46B7DAB9B898EA4848&amp;View=%7b2FA257F7%2d920F%2d4DAF%2dAF27%2d1C5440FE917A%7d</a>
ISRM Primer	00.07.00	08.03.10	
ISRM Foundation Rulebook	00.07.00	08.03.10	
ISRM Modelling Guidelines	00.07.00	08.03.10	
ISRM Tooling Guidelines	00.07.00	08.03.10	
ISRM Verification Guidelines	00.07.00	08.03.10	
ISRM Configuration Management Plan	00.07.00	08.03.10	
ISRM Consolidation Guidelines	00.07.00	08.03.10	
AIRM	04.01.00	08.01.03	<a href="https://extranet.sesarju.eu/WP_08/Project_08.01.03/Project%20Plan/8.1.3.D47_AIRM%20v4.1.0.doc">https://extranet.sesarju.eu/WP_08/Project_08.01.03/Project%20Plan/8.1.3.D47_AIRM%20v4.1.0.doc</a>

## 1.5 Major changes in this version

Besides new and updated services, this version has no major changes.

## 1.6 Glossary of terms

N/A

## 1.7 Acronyms and Terminology

Term	Definition
<b>ISRM</b>	Information Service Reference Model
<b>OSED</b>	Operational Service and Environment Definition
<b>SCG</b>	Service Coordination Group
<b>SESAR</b>	Single European Sky ATM Research Programme
<b>SESAR Programme</b>	The programme which defines the Research and Development activities and Projects for the SJU.
<b>SID</b>	Service Identification Document
<b>SDD</b>	Service Design Document

## 2 ISRM Overview

### 2.1 ISRM model

The services of the ISRM are described in the model according to the following structure:

The elements related to service design are available in 'NSOV Service-Oriented Views' package with sub packages.

In the Common sub package of package 'NSOV Service-Oriented Views' diagrams and elements relevant to more than one service are found.

Model elements for identified but not designed services are stored in a dedicated sub package.

For each of the designed service, the following sub packages are provided:

- Artefacts, containing artefacts, where relevant.
- Views, containing all diagrams showing different aspects of the service. Each diagram has a prefix consisting of the name of the NSOV view represented by the diagram.
- Elements, containing all elements created specifically for the service.

On the top level the NAF viewpoints has one package each:

- NAV All Views
- NCV Capability Views
- NOV Operational Views
- NPV Programme Views
- NSOV Service-Oriented Views
- NSV System Views
- NTV Technical Views

The NOV, NSOV and NSV views are populated. In NOV-7 Information model of AIRM 04.01.00 is imported. In NSV-11a the Consolidated Logical Data model from AIRM 04.01.00 is imported. In NSV-11b the AIXM 5.1 with official extensions and SESAR extensions is imported.

In some NOV and NSOV view diagrams imported elements from MEGA are used. Nodes imported from MEGA are located in package SESAR EA/NSOV Service-Oriented Views/Pre and post modelling/Elements.Nodes/Imported EATMA Nodes.

The ISRM 2.0 model is found on the Extranet in a sub folder to the Execution folder. The model is provided in a dedicated file format for the modelling tool Enterprise Architect provided by Sparx Systems [7].

To open the file you need Enterprise Architect installed. Just copy the file to your local drive, unpack it and double click on the icon.

### 2.2 Service Portfolio

The ISRM Service Portfolio, as described in working method on services [1] provides an overview description of all designed services in the ISRM model. The ISRM Service Portfolio also includes a service taxonomy.

The ISRM 2.0 Service Portfolio is found in the ISRM 2.0 sub folder [3].

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## 2.3 Service Description Documents

For each designed service in the ISRM a Service Description Document (SDD) is created. The role of the SDD is to present the service in an easily readable format. Most of the information in the ISRM is available in the SDD, but to investigate technical details in the service design it is also recommended to view the model in Sparx Enterprise Architect [7].

The SDDs for new or updated services in this delivery are found in the ISRM 2.0 sub folder [3] together with SDDs for services delivered earlier.

## 2.4 Service Identification Documents

In ISRM 2.0 no service identification documents are delivered.

## 2.5 Delivery precision

The ISRM 2.0 was submitted to SJU on June 3<sup>rd</sup> 2016 and included delivery of 40 services. The work was based on ISRM release plan [5] and conducted according to a documented plan [6]. Main focus for this delivery was to bring existing services up to a common foundation and service linkages to common versions of AIRM and EATMA. The only planned new service was delivered; out of 38 planned updates, 37 were completed. Update of one service was not included in the planned work. An overview of the delivered services is provided in the table below.

**Table 1 – Overview of deliveries from fast tracks / service activities for ISRM 2.0**

FT/SVA	Service	comment
FT1/2	AirportMETInducedCapacityReduction	Updated
FT1/2	AirportMETNowcast	Updated
FT1/2	NetworkOperationPlan	Updated
FT4	AeronauticalInformationFeature	Based on ISRM Foundation Rulebook edition 00.03.10. Not delivered according to plan, please see Issue 5900.
FT6	AerodromeMapInformation	Updated
FT7/13	AeronauticalInformationMap	Based on ISRM Foundation Rulebook edition 00.03.10. Not included in the planned update.
FT7/13	AeronauticalInformationNotification	Updated
FT9	ARESPreActivation	Updated
FT9	ARESActivation	Updated
FT9	ARESDeactivation	Updated
FT9	ARESRelease	Updated
FT10	AirportFlightInformationPublication	Updated
FT10	CalculatedPreDepartureSequenceDelivery	Updated
FT10	PreDepartureSequenceSetting	Updated
FT10	TargetOffBlockTimeSetting	Updated
FT11	RunwayMixSequence	Updated
FT12	ReportAircraftETAMinMax	Updated
FT12	ReportAircraftTrajectory	Updated
FT14	ExtendedFlightPlanSubmission	Updated
FT14	FlightPlanDataDistribution	Updated
SVA002	ArrivalSeparationIndicator	Updated
SVA003	METAR	Updated
SVA003	TAF	Updated
SVA003	SNOWTAM	Updated
SVA003	AirportMETObservation	Updated
SVA003	AirportMETForecast	Updated

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SVA003	METREPORT	Updated, renamed (ICAOMetLocalReport)
SVA004	OATFlightPlanSubmission	Updated
SVA004	OATFlightDataDistribution	Updated
SVA005	ArrivalManagementInformation	Updated
SVA005	DeparturePlanningInformation	Updated
SVA006	RunwayManagementInformation	Updated
SVA008	ARESQuery	Updated
SVA010	METHazardEnRouteForecast	Updated
SVA010	METHazardEnRouteObservation	Updated
SVA010	METGriddedForecast	Updated
SVA011	ATCFlightObjectControl	Updated
SVA011	SharedFlightObject	Updated
SVA012	AirportMETAlert	Updated
SVA013	IntegratedDigitalBriefing	New service, initiated at SCG 29 in November 2015

## 3 ISRM 1.4 Consolidation

### 3.1 Consolidation process

The consolidation has been performed according to ISRM consolidation guideline based on best practices from the consolidation work for earlier versions of ISRM. The process flow is described as follows:

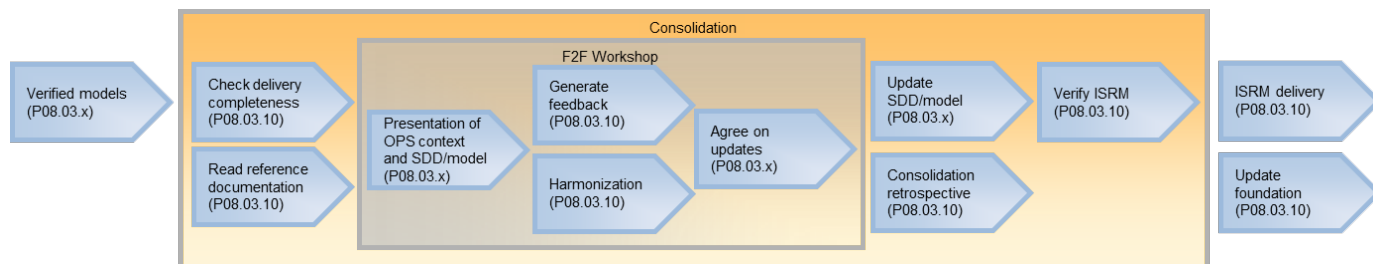


Figure 1 – Overview of the ISRM consolidation process

### 3.2 Verification

As depicted in the figure above, ISRM verification is conducted prior to delivery of the ISRM. For ISRM 2.0, the result of the verification is located in ISRM 2.0 verification reports subfolder [4].

#### 3.2.1 Verification Method

The verification consists of

- An automated part, where a script analyses the model and identifies if the modelling was done according to the rulebook or violates a valid rule.
- A manual part, where the rules are stated but the analysis has to be done by the person that verifies the model. This is the only way to verify some of the rules, but can also be used for other rules as well e.g. to double-check a verification result.

The following color codes are used for the entries in the verification report to indicate the outcome of an automated verification:

- Red: Rule fails
- Green: Rule succeeds
- Blue: The rule is semi-automatic (i.e. additional manual verification is needed)

## 4 References

- [1] [B 04 03 D100 Working method on Services 2014 edition, version 00.05.00](#)
- [2] [AIRM Compliance Framework, version 02.02.06](#)
- [3] [ISRM 2.0 subfolder in P08.03.10 execution area in SESAR extranet](#)
- [4] [ISRM 2.0 Verification Reports subfolder in P08.03.10 execution area in SESAR extranet](#)
- [5] [ISRM Release plan](#)
- [6] [ISRM 2.0 Planning document](#)
- [7] [Sparx website](#)

**-END OF DOCUMENT-**

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