PSI READ-ME-FIRST

PSI-READMEFIRST

Version:	MS11 [1.3.0]
Date:	2025-04-23
Reference:	PSI-READFIRST
Total Pages:	12

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Table of Contents

List of Figures

List of Tables

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1 Document Meta Information

1.1 Document Signature Table

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Author	Hendrik Oppenberg	Technical Officer	CGI
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Approval	Wolfgang Robben	Project Manager	CGI
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Checked	Pepijn Witte	Quality Assurance Manager	CGI

Table 1.1: Signature Table.

1.1.1 Document Change Record

1.1.1.1 Changes

Date	Version	author	message
2023-01-01	MS3	Christine Glaesser	Initial version
2023-04-19	MS4	Dafinka Srezoska	Minor reformattings
2023-07-27	MS5	Christian Grubert	Format updates
2023-10-06	MS6	Christian Grubert	Fixed milestone entries
2024-01-25	MS7	Wolfgang Robben	Updated milestone entries
2024-09-11	MS8 [1.2.0]	Thomas Schulz	Public release adjustments.
2024-12-09	MS9 [1.2.1]	Wolfgang Robben	No updates.
2025-02-03	MS10 [1.2.2]	Wolfgang Robben	No update, just version bump.
2025-04-23	MS11 [1.3.0]	Hendrik Oppenberg	No update, just version bump.

Table 1.2: DCR Table.

1.1.1.2 Source Control

Changes to this document are tracked electronically. No signature is required by the authors. The following information can prove the integrity of the document and reveal any change.

Repo	Date	Author	Branch	Hash

Table 1.3: GIT Changelog Table.

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Figure 1.1: DCR QR-Code.

1.2 Documents

1.2.1 Reference Documents

Acronym	Reference	Title	Version
PSI-DL	PSI-DL	PSI CGI Document List	current MS (doc version)
PSI-ICD	PSI-ICD	PSI Interface Control Document	see before
PSI-MADR	PSI-MADR	PSI Markdown Administrative Decision Records	see before
PSI-REQ	PSI-REQ	PSI Requirements	see before
PSI-RR	PSI-RR	PSI Risk Register	see before
PSI-SDP	PSI-SDP	PSI Strategy And Development Plan	see before
PSI-SLF	PSI-SLF	PSI Software License File	see before
PSI-TAD	PSI-TAD	PSI Terms, Abbreviations and Definitions	see before
PSI-TOD	PSI-TOD	PSI Tasks and Operations Dictionary	see before
PSI-VVP	PSI-VVP	PSI Verification And Validation Plan	see before

Table 1.4: Reference Documents.

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2 Introduction

The Pooling & Sharing Interfaces Definitions (PSID) project is an ESA co-funded effort to define a common standard for the interfaces of Pooling & Sharing Systems (PSS) for Satellite Communication (SatCom) services. A PSS is a digital platform for matchmaking (Gov)SatCom users' demands (both commercial and institutional) with (Gov)SatCom providers' offers. Bringing together multiple (Gov)SatCom providers in one platform makes the market transparent, thus allowing users to get an overview of the market and to compare different offers efficiently. Additionally, a PSS assists users with little knowledge about the (Gov)SatCom domain defining their requirements on the (Gov)SatCom services. Those two aspects combined allow for fast access to the services and an efficient usage of the available capacities. To accomplish this, a PSS steps in between the usual processes of finding a provider/supplier, requesting an offer, and ordering the desired products or services, either as a service broker or by pooling products and services from different providers and offering them as an intermediary or distributor. Subsequently, the PSS can be used to monitor the services and manage multiple missions in a single application.

Eventually, a PSS can also be used as (or manage) a community hub, i.e., a number of end users or customers with similar interest that *share* their common resources and utilize a commonly obtained *pool* of (Gov)SatCom capacities. This strategy increases the efficient usage of scarce resources further.

There are already different approaches on PSSs, that might lead to an unnecessary fragmentation of the market. Therefore, a common standard for the interfaces of a PSS is required to allow the interaction between those different PSSs and reduce the effort of (Gov)SatCom providers to offer their product and services via multiple PSSs to maximize their reach.

Such a standard needs to take care of the different interfaces involved in the aforementioned processes, i.e.,

The goal of this project is to mainly define aspect 1 and to develop a software mock-up as needed to validate the various interfaces being developed.

The PSI standard derives from the existing industry-standard "Open Digital Framework" of **TM Forum** alliance[1]. The "Open Digital Framework" is a reference framework for delivering online Information, Communications and Entertainment services to the telecom world. It empowers market participants to compete and cooperate. One of PSI's goals is to make this existing standard fit for the world of satellite communication.

The consortium for this project consists of the service & technology providers SES Techcom and CGI, as well as of the (Gov)SatCom operators SES, Hellas Sat, Hispasat, Hisdesat, and LuxGovSat, and Inmarsat being both a service & technology provider and a (Gov)SatCom operator.

[1] See https://www.tmforum.org/resources/reference/gb991-tm-forums-core-concepts-and-principles-v22-0-0/

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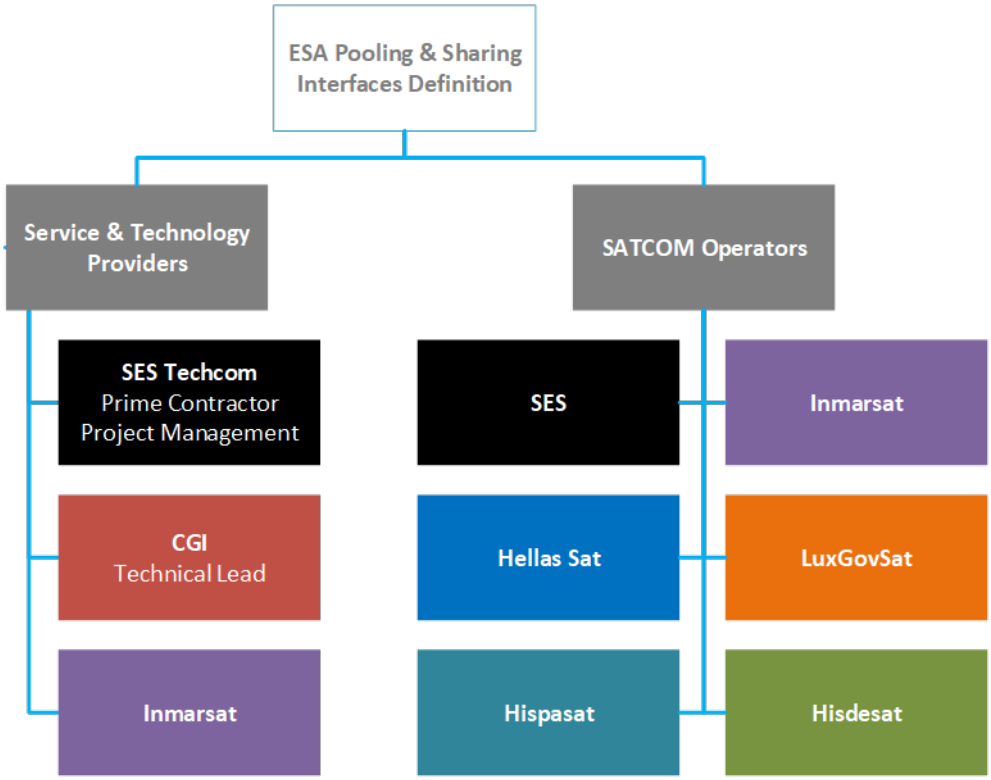

Figure 2.1: The PSI consortium.

2.1 Document Scope

This **READ ME FIRST** document provides the list of all documents already released as part of this project and the suggested order in which to read them.

2.1.1 Compiled Document

NOTE: THIS IS A COMPILED DOCUMENT [2]

This document has been compiled/generated from external sources and is not being written as-is. Therefore, any changes made within this compiled version of the document will be lost upon recompilation!

To make (permanent) changes, edit the respective sources directly or contact the PSID team.

2.1.2 Signature

Changes to this document are tracked electronically. No signature is required by the authors. The information in the “Source Control” chapter can prove the integrity of the document and reveal any change.

[2] Document compiled on 2025-04-23 12:37.

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2.1.3 Development State

Current document version is `1.3.0`.

2.1.4 Release Notes

[[*TOC*]]

2.1.5 PSI Release Notes

2.1.5.1 Introduction

Welcome to the latest release of the Pooling and Sharing Interface (PSI) API!
This document outlines the new features, improvements, and important updates included in this version.

2.1.5.2 Key Highlights

The central focus of this release is the implementation of the **Mission Management ODA Blueprint**.
This component complements the mission-related APIs by providing a *reference implementation of graphical user interfaces* that help users specify their product and service requirements.

Designed with users in mind, this component uses templates to simplify mission creation and introduces a governance layer to facilitate and control the requirements collection process.
It's built as a standalone micro-frontend and can be easily integrated into existing OSS/BSS/PSS systems.

The interface includes multiple visualization modes:

Another major update in this release is the migration to **TM Forum APIs Version 5 (TMF5)**.
All APIs have been ported to the current TMF baseline.
However, TMF5 introduced some gaps in the Component Test Kit (CTK), resulting in partial test coverage for certain APIs. This limitation will be addressed once TM Forum updates the CTK.

Additionally, this release introduces **MEF-compatible APIs**, marking the beginning of convergence between MEF and TMF frameworks within PSI.
Our goal moving forward is to support both API standards in their respective areas.

2.1.5.3 What's New

2.1.5.3.1 Newly Added APIs

2.1.5.3.2 Updated APIs

2.1.5.3.3 Added Requirements

2.1.5.4 Known Limitations

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2.1.5.5 Feedback and Contributions

We appreciate your input!
If you experience any issues or have suggestions, please don't hesitate to contact us.
We also encourage community contributions to help enhance PSI further.

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3 Suggested Reading Order

Our documents contain references to other released documents and build upon knowledge gained by reading the referenced document(s).

Thus, for better understanding of our concepts, we suggest three different approaches for reading our documents.

3.1 Reading All Documents

To read all our documents, we suggest the following order:

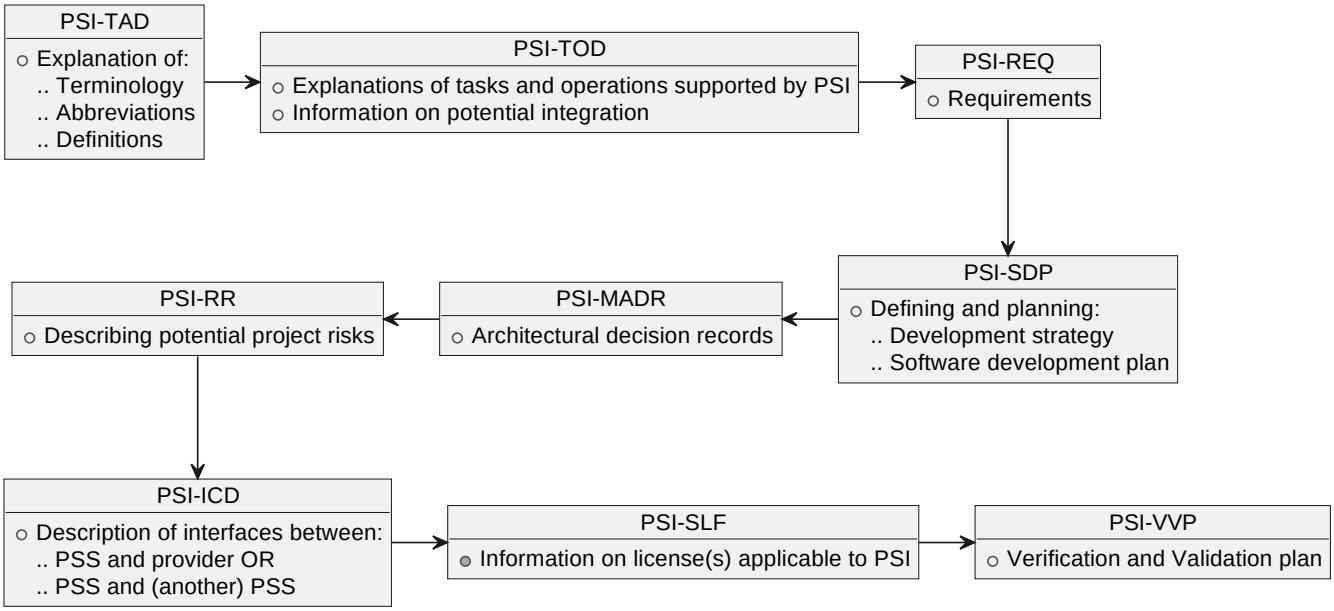

Figure 3.1: Document Reading Order - All Documents.

3.2 Reading Documents from Perspective of Interface Implementation

To read our documents with focus on the interface implementation, we suggest the following order:

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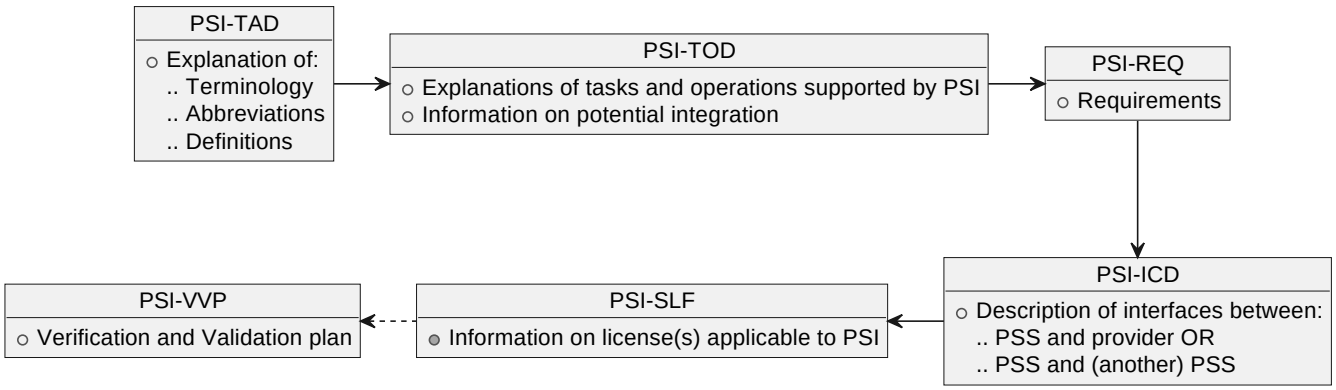

Figure 3.2: Document Reading Order from Interface Implementation Perspective.

3.3 Reading Documents from Perspective of Project Management

To read our documents with focus on the project management, we suggest the following order:

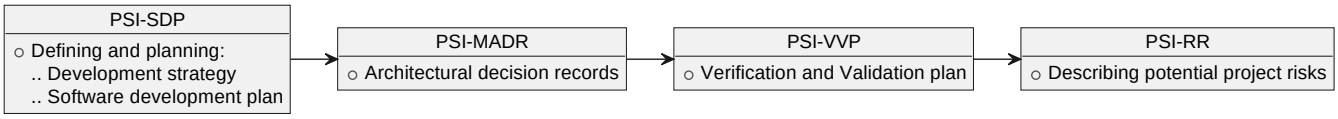

Figure 3.3: Document Reading Order from Interface Implementation Perspective.

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4 Description of Documents

The **PSI-TAD** document explains terminology, abbreviations and definitions used throughout all documents. It determines the *language* which will be applied to the documents, thus reading this document will grant a common understanding to the other documents.

PSI-TOD explains tasks and operations supported by PSI, which are based on given requirements. PSI-TOD already mentions the PSI-ICD document, but we recommend reading the ICD after the general structures have been understood or use it only as a reference for now.

The requirements, defined in **PSI-REQ**, build the basis of the endpoints needed for the operations described here. As such, they provide understanding on how decisions and strategies were made and implemented.

The software development strategy and planning is described in **PSI-SDP**. This document also elaborates the general project plan.

PSI-MADR describes decisions that were taken on the project. Those decisions have an immediate influence on other documents as, e.g., the TAD. The architecture described in this document is designed to meet needs for interface implementation and project management, e.g. how the repository should be structured, how the mock-up shall be implemented etc.

Subsequently, risks that may arise due to decisions being made or strategies being defined within the documents already read are defined in document **PSI-RR**.

Document **PSI-ICD** describes the planned and already prototyped interfaces. Accordingly, (software) licenses applicable to PSI can be reviewed in document **PSI-SLF**.

Eventually, the **PSI-VVP** document contains information on the planned verification and validation. Those depend on the ICD definitions as well as the requirements and may change due to the implementation and description of interfaces.

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Last Page of Document

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