PSI READ-ME-FIRST

PSI-READMEFIRST

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1 Document Meta Information

1.1 Document Change Record

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.

Figure 1.1: DCR QR-Code.

1.2 Documents

1.2.1 Reference Documents

Acronym	Reference	Title	Version
PSI-DL	PSI-DL	PSI Document List	1.0.0
PSI-CST	PSI-CST	PSI Case Study	1.0.0
PSI-GID	PSI-GID	Graphical Interface Description	1.0.0
PSI-ICD	PSI-ICD	Interface Control Document	1.0.0
PSI-REQ	PSI-REQ	Interface Requirements Document	1.0.0
PSI-SLF	PSI-SLF	Software License File	1.0.0
PSI-TAD	PSI-TAD	Terms, Abbreviations and Definitions	1.0.0
PSI-TOD	PSI-TOD	Tasks and Operations Dictionary	1.0.0

Table 1.1: Reference Documents.

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 SatCom users' demands (both commercial and institutional) with SatCom providers' offers. Bringing together multiple 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 SatCom domain defining their requirements on the SatCom services. Those two aspect 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 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 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.,

1. an interface between PSS and resource providers (satellite operators, service providers, or other PSSs),
2. an interface between the PSS and users, and
3. an interface between PSS and its own governance.

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 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 SatCom operators SES, Hellas Sat, Hispasat, Hisdesat, and LuxGovSat, and Inmarsat being both a service & technology provider and a SatCom operator.

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

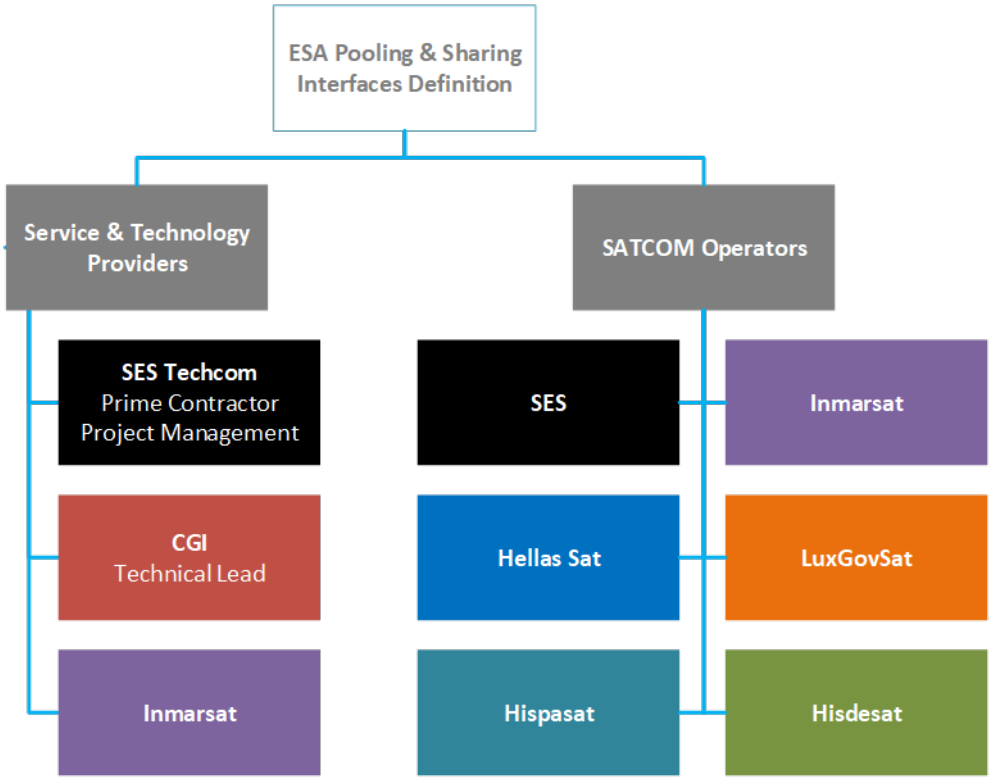

Figure 2.1: The PSI consortium.

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 2024-08-07 01:57.

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:

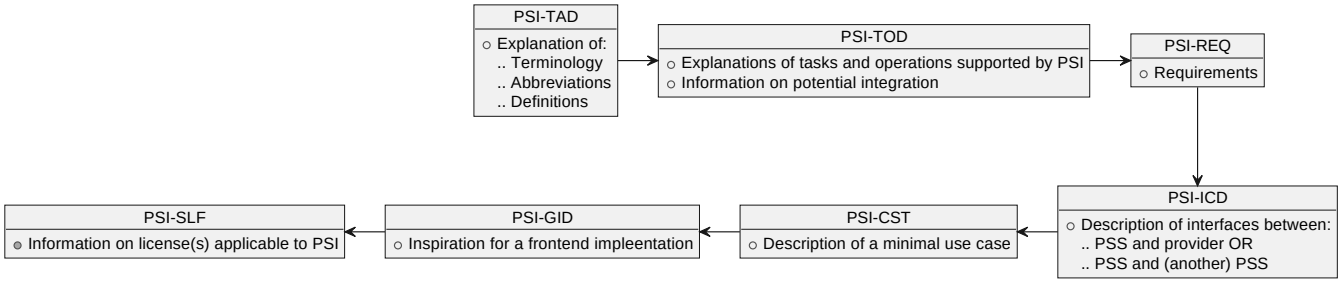

Figure 3.1: Document Reading Order - All Documents.

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.

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

The **PSI-CST** describes a minimal use case implementing the interfaces and making use of the processes by coupling a PSS and a provider system via the PSI interfaces.

Eventually, the **PSI-GID** is thought to be an inspiration for the development of the frontend with wireframes and hints where to implement which endpoints.

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