Software Requirements Specification: D-XXX

EOX Team

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version 0.1, 11/12/2023

DESIDE - Software Requirements Specification

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AMENDMENT HISTORY

This document shall be amended by releasing a new edition of the document in its entirety.  
The Amendment Record Sheet below records the history and issue status of this document.

Table 1. Amendment Record Sheet

|  |  |  |
| --- | --- | --- |
| ISSUE | DATE | REASON |
| 0.1 | 11/12/2023 | Initial in-progress draft |
| 1.0 |  | First released version |

## 1. Introduction

### 1.1. Purpose and Scope

This document represents the Software Requirements Specification (SRS) for the DESIDE. This document describes the functional and non functional requirements applicable. This document forms the basis against which the detailed design, implementation, unit and integration testing, and the verification are performed and outlined in the Software Verification and Validation Plan (SVVP) and Software Verification and Validation Report (SVVR).

### 1.2. Structure of the Document

Section 2 - [Overview](#mainOverview)

This section provides an overview of the DESIDE DESIDE

Section 3 - [Software Requirements Specification](#mainRequirements)

This section provides the software requirements for the DESIDE DESIDE

### 1.3. Reference Documents

The following is a list of Applicable and Reference Documents with a direct bearing on the content of this document.

|  |  |  |
| --- | --- | --- |
| Reference | Document Details | Version |
| [SOW] | Statement of Work Destination Earth DESP Use Cases selection - Round 1 Reference: CS301353.Docref.0002 | 1.0 |
| [Proposal] | Proposal No. 8482: DestinE Sea Ice Decision Enhancement (DESIDE) | 1.1 06/06/2023 |

### 1.4. Terminology

The following terms have been used in this document.

|  |  |
| --- | --- |
| Term | Meaning |
| Admin | User with administrative capabilities on a platform. |
| Code | The codification of an algorithm performed with a given programming language - compiled to Software or directly executed (interpreted) within the platform. |
| Discovery | User finds products/services of interest to them based upon search criteria. |
| Interactive Web Application | An Interactive Application for analysis provided as a rich user interface through the user’s web browser. |
| Key-Value Pair | A key-value pair (KVP) is an abstract data type that includes a group of key identifiers and a set of associated values. Key-value pairs are frequently used in lookup tables, hash tables and configuration files. |
| Object Store | A computer data storage architecture that manages data as objects. Each object typically includes the data itself, a variable amount of metadata, and a globally unique identifier. |
| Products | EO data (commercial and non-commercial) and Value-added products. |
| Software | The compilation of code into a binary program to be executed within the platform on-line computing environment. |
| User | An individual using the services. |
| Visualization | To obtain a visual representation of any data/products held within the platform - presented to the user within their web browser session. |
| Web Coverage Service (WCS) | OGC standard that provides an open specification for sharing raster datasets on the web. |
| Web Feature Service (WFS) | OGC standard that makes geographic feature data (vector geospatial datasets) available on the web. |
| Web Map Service (WMS) | OGC standard that provides a simple HTTP interface for requesting geo-registered map images from one or more distributed geospatial databases. |
| Web Map Tile Service (WMTS) | OGC standard that provides a simple HTTP interface for requesting map tiles of spatially referenced data using the images with predefined content, extent, and resolution. |
| Web Processing Services (WPS) | OGC standard that defines how a client can request the execution of a process, and how the output from the process is handled. |

### 1.5. Glossary

The following acronyms and abbreviations have been used in this document.

|  |  |
| --- | --- |
| Term | Definition |
| ADD | Architecture Design Document |
| AOI | Area of Interest |
| API | Application Programming Interface |
| COG | Cloud optimized GeoTiff |
| EO | Earth Observation |
| EOX | EOX IT Services GmbH |
| ESA | European Space Agency |
| FUSE | Filesystem in Userspace |
| ICD | Interface Control Document |
| JSON | JavaScript Object Notation |
| KVP | Key-value Pair |
| M2M | Machine-to-machine |
| OGC | Open Geospatial Consortium |
| REST | Representational State Transfer |
| SDD | Software Design Document |
| SFTP | Secure File Transfer Protocol |
| SRF | Software Reuse File |
| SRN | Software Release Note |
| SRP | Software Release Plan |
| SRS | Software Requirements Specification |
| SSH | Secure Shell |
| STAC | Spatio-Temporal Asset Catalog |
| SUM | Software User Manual |
| SVVP | Software Verification and Validation Plan |
| SVVR | Software Verification and Validation Report |
| TOI | Time of Interest |
| UMA | User-Managed Access |
| US | User Story |
| WCS | Web Coverage Service |
| WFS | Web Feature Service |
| WMS | Web Map Service |
| WMTS | Web Map Tile Service |
| WPS | Web Processing Service |
| WPS-T | Transactional Web Processing Service |

## 2. Overview

This section provides an overview of the DESIDE DESIDE. It highlights …​

## 3. Software Requirements Specification

This chapter lists the software requirements with a requirements matrix and references to documents.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Doc | Reference | Section | Title | Short Description | Compliance |
| SOW | TBD | TBD | TBD | TBD | C/N/P |
| SOW | TBD | TBD | TBD | TBD | C/N/P |

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Version 0.1  
Last updated 2023-12-11 14:56:06 UTC