System Design Description (SysDD) Template – White Box Design

**Abstract**

This document provides the main template for the description of Arrowhead Systems technological implementations. In this document the solution for the actual implementation of the System is pointed out.

This document is an optional one. If the actual implementation is not needed, the usage of the System Description document should be adequate to reveal the interfaces and services.

All Arrowhead Systems should be specified using this template and stored on a common repository (available in the SVN Server), in order to document and formalize the pilot demonstrators.

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## System Design Description Overview

The document should include informations regarding the Name of the System in Table 1 (e.g. Aggregator), the owner of the System (e.g. ISEP), and MUST contain pointers to SysD documents, as in Table 2.

**Table 1 System Information**

|  |  |
| --- | --- |
| **Name** | An unique name readable by humans |
| **Owner** | Responsible of the overall system integrating all the services |

**Table 2 Pointers to SysD documents**

|  |  |
| --- | --- |
| **System name** | **Path** |
| System1 | Path the document on the repository |
| System2 | Path the document on the repository |

It should include one or more eye catching figures into this description.

This document does not report non-functional requirements (QoS, robustness, etc) since they are related to the interaction between systems and to the SoS as a whole, and are thus defined in the SoSD (objectives) and SoSDD documents (implementations).

## Internal structure

This section reports the internal structure of the system in terms of classes, and the location of the classes into the program files. The UML Component diagram or the SysML Block Definition diagram are recommended for a formal description of the class structure.

Pointers to the location of the program files can be given using a table.

**Table 4 Program files**

|  |  |
| --- | --- |
| **Class name** | 1. Name of the file(s) / optional location of the file(s) |

## Security

This chapter describes how security is implemented into the systems.

## Technical Security Requirements

In this chapter the technical realization of the non-technical System security requirements, specified in chapter 4 of the document SySD is specified.

## Decomposition of the System

In this section a detailed description of the System implementation is required. The description needs to cover the following points:

* Architecture of the System internals (diagrams, explanations, technologies used)
* Technical description of interface implementation (interfaces between Systems)
* Description of implementation of access control mechanisms
* Programming languages used

## Data Flow Diagram

Provide a Data Flow diagram of the System.

## Threats and Vulnerabilities

This chapter contains any known threats and vulnerabilities to the System.

## References

Any references must be placed here

## Revision history

## Amendments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Date | Version | Subject of Amendments | Author |
| 1 | 2020-05-27 | 1.0 |  | Jerker Delsing |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 7 |  |  |  |  |
| 8 |  |  |  |  |

## Quality Assurance

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Date | Version | Approved by |
| 1 |  |  |  |
| 2 |  |  |  |