SysDD Temaplate - White box design

Contents

This document is optional. We are here recommending a structure for this document, but the list of sections can be modified on a case by case basis. It can 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).

1 System Design Description Overview

In Table 1 the global System Information is given.

Name	An unique name readable by humans
Maintainer	e.g. Jerker Delsing, jerker.delsing@ltu.se
SySD document	Path in Arrowhead Framework repository

Table 1: System information

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

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2 Use-cases

Describe typical use cases e.g. using UML use cases diagrams, which can be realised by the system.

Only add this section if relevant in relation to SysD document. Each use-case description should follow the structure defined in Table 3.

Table 1 Use-case description

Name of the Use-case
ID: Unique ID
Brief description: Give a brief description of the use-case.
Primary actors: Present the primary actor, e.g.,Prosumer
Secondary actors: Present the secondary actors, e.g., Virtual Market of Energy
Preconditions: If there are any
Main flow: Present in a sequence of steps the interactions among the actors 1- 2- 3- . . . . .
Postconditions: If there are any
Alternative flows: Any possible alternative flows to the sequence presented in the Main flow section.

3 Typical Scenarios (optional)

Table 4 Typical Scenario description

Typical Scenario	For white-box design, describe typical interactions between required and provided service e.g. • using UML sequence diagrams, which can be used as test cases for system integration testing • implementing UML or SysML activity diagrams, which can be used as process definition for the system or the integration between systems

4 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	Name of the file(s) / optional location of the file(s)

5 Security

This chapter describes how security is implemented into the systems.

5.1 Technical Security Requirements

In this chapter the technical realization of the non-technical System security requirements, specified in chapter 5.3 of the document SySD is specified.

5.2 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 (diagrams, explanations, technologies used)
- Technical description of interface implementation (interfaces between Systems)
- Description of implementation of access control mechanisms
- Programming languages used

5.3 Technical Security Requirements

In this chapter the technical realization of the non-technical System security requirements, specified in chapter 5.3 of the document SySD is specified.

5.4 Data Flow Diagram

Provide a Data Flow diagram of the System.

5.5 Threats and Vulnerabilities

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

6 References

Any references must be placed here

7 Revision history

7.1 Amendments

No.	Date	Version	Subject of Amendments	Author
1	2013-12-03	0.2	Revision	Christos Chrysoulas
2	2013-12-18	0.3	Text Revisions	Christos Chrysoulas

3	2013-12-24	0.4	Added quick parts and saved as template	Ove Jansson
4	2015-02-19	1.0	Revision	Michele Albano / Luis Ferreira
7	2015-09-30	1.1	Refinement of the structure	Michele Albano / Luis Ferreira
8	2015-09-30	1.1	Revision	Iker Martínez de Soria
9	2016-03-19	1.2	Transfer to Latex	Jerker Delsing

7.2 Quality Assurance

No.	Date	Version	Approved by
1			
2			