# Software Requirements DOCUMENTATION

This is an example of how requirements can be documented. Project specific document templates may also be used. For software developed by the ISSMP team, a System Requirements and Verification Document (SRVD) should be developed. Text in italics is instructional and should be deleted from the final document. Bold-faced text should be replaced with the information requested.

### 1.0 Scope

*Please define the scope of the software and how it will be used.*

This document contains the requirements for the **Insert Software Name Here**.

Table 1-1 and Table 1-2 should be completed. Text displayed in the table is sample text.

TABLE 1-1. REQUIREMENTS TRACEABILITY MATRIX

|  |  |
| --- | --- |
| Source Requirement Identifier | Software Requirement |
| *Source 1* | *Software 1, Software 2* |
| *Source 2* | *Software 1, Software 2* |
| *Source 3* | *Software 3* |

TABLE 1-2. REQUIREMENTS ALLOCATION MATRIX

|  |  |
| --- | --- |
| Software Requirement | Source Requirement Identifier |
| *Software 1* | *Source 1, Source 2* |
| *Software 2* | *Source 1, Source 2* |
| *Software 3* | *Source 3* |

2.0 Documents

Add any software-specific applicable or referenced documents to this section. This should include the Software Development Plan (SDP) used for planning and developing the software

|  |  |  |
| --- | --- | --- |
| **Document Number** | **Revision/ Release Date** | **Document Title** |
| JPR 7150.2 | *Revision x mm/dd/yy* | Johnson Space Center (JSC) Software Engineering Procedural Requirements |
| SSP 50313 | *Revision x*  *mm/dd/yy* | Display and Graphics Commonality Standard |
|  | *Revision x mm/dd/yy* |  |
|  |  |  |
|  |  |  |
|  |  |  |

#### 3.0 Definitions

This section contains definitions of any terms that may be confusing to the reader.

#### 4.0 [**CSCI ID Name**]

Replace the x with the actual section number. Replace title text with actual CSCI name.

*The following terms are used throughout this section to differentiate between requirements and other statements.*

*Shall: This is the verb to use for the binding requirements.  
 Should/May: These verbs are used for stating non-mandatory goals.  
 Will: This verb is used for stating facts or declaration of purpose*.

In paragraph form describe what the CSCI does and why it exists.

4.1 CSCI Functional and Performance Requirements

Listed below are the functional and performance requirements specific to the [**CSCI ID Name**]**.**

List the functional and performance requirements specific to the CSCI, including top-level functional requirements of the user interface and operational scenarios. The requirements shall specify required behavior of the CSCI and shall include applicable parameters, such as response times, throughput times, other timing constraints, sequencing, accuracy, capacities (how much/how many), priorities, continuous operation requirements, and allowable deviations based on operating conditions. The requirements shall include modes to be supported and, as applicable, required behavior under unexpected or "out of bounds" conditions, requirements for error handling, and any provisions to be incorporated into the CSCI to provide continuity of operations in the event of emergencies. If the only mode that the CSCI must support is a nominal operations mode, please state this. When describing the functional and performance requirements, if a requirement is restricted to an operational mode, clearly identify the operational mode associated with the requirement. For example:

The CSCI shall allow thirty parameters to be displayed in nominal operation mode. In degraded mode, fifteen parameters shall be displayed.

*NOTE: In the above example, if the parameters are known, they should be specified in the requirement.*

*In the Preliminary Design Review (PDR) version of the requirements, some of the performance information may not be known. Use To Be Determined (TBD) for those performance criteria that are important but not known.*

4.2 CSCI External Interface Requirements

Listed below are the external interface software requirements for the [**CSCI ID Name**].

##### 4.3 CSCI Adaptation Requirements

Identify the requirements, if any, which dictate how installation-specific implementations of software, data files or operational parameters must be handled by this CSCI. If there are no applicable requirements, use the default text in this section.

The **[CSCI ID Name]** shall read file pathnames required for proper execution of the software from a configuration file.

##### 4.4 Data Privacy Requirements

If the data generated by the device contains information that is considered to be private, replace the default text in this section with the requirements for how the data must be protected.

There are no CSCI data privacy requirements for the [**CSCI ID Name**].

##### 4.5 CSCI Environment Requirements

This paragraph shall specify the requirements, if any, regarding the environment in which the CSCI must operate. Examples the operating system (32 or 64 bit, any required software (Adobe Reader, Microsoft Word, etc.).

.

The [**CSCI ID Name**] shall execute in the *[insert OS Name]* environment.

The [**CSCI ID Name**] shall utilize [*insert expected disk space requirements here*.

*If system response time or other environmental parameters are required for proper software performance, requirements for these parameters must be specified here.*

##### 4.6 Design and Implementation Constraints

User interface software associated with the **[CSCI ID Name]** will comply with SSP 50313, Display and Graphics Commonality Standards (DGCS) ([see](http://139.169.159.8/idags/dgcs.html) Experiment Element for information).

##### 4.7 Precedence and Criticality of Requirements

*If all requirements must be met, then use the default text. If there are some requirements that are more important than others, clearly identify which requirements must be met and which requirements may be waived to meet the critical requirements.*

All requirements are equally weighted and are not listed in any order of precedence or criticality.

5.0 Notes