



Testing

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General Testing Concepts

- This an internal project, everyone is committed to a sustainable, maintainable, configurable, and usable tool.
 - Requirements are intended to build common understanding of the needs.
 - *No requirements lawyers allowed.*
- Verification: DMS responsibility.
 - Demonstrate that the system is behaving as designed.
- Validation: Project [Scientist] responsibility.
 - Does the system behave as we need it to.

Testing

SRDP-523: Test Plans

The description of test plans is a little weak. ...but do the descriptions meet the level of the statement in the DMSSD Work Management Plan, section 5.3: "As part of conceptual architecture development, the stakeholders, the Validation Lead, and the DMS Architect will define tests to validate the conceptual system model."?

A detailed testing plan has been discussed, but not recorded properly. Next slides present the testing as we see it throughout the project.

Suggested Action: Update the documents to be consistent with this planning.

Testing

Test Plan: Validation of Conceptual Architecture

- Project Scientist has prepared a “System Walkthrough”
 - Detailed examples of the system actions
 - Specific rather than general (like the system description)
 - Narrow path through the full system.
- DMS Architect and SSA Team will use Walkthrough (and System Description) in “Logical Design Initiation” to validate the architecture.

Testing

Test Plan: Verification and Validation

- Verification will be done internal to DMS using continuous integration and testing methodologies.
- Validation is **led** by the project scientist.
 - Detailed estimates of effort from other stakeholders is included in Work Package effort estimates (not presented to committee).
- Validation at end of each phase may be using script, command line interfaces, etc.
 - Separate the presentation layer testing from business logic.
 - Simplify development of automated regression tests (both verification and validation).
- Stakeholders available during implementation for preliminary validation and feedback.

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User Interface Testing

Four Levels of User Interface Testing

- User interfaces are developed in phases in conjunction with an identified expert.
 - Agile development model, rapid feedback to development team.
- During system integration all of the interfaces will be exercised to ensure common behavior.
- Several training sessions are planned (both internal and external) these sessions will also provide feedback on the UX.
- Final formal test of UX as part of Operational Readiness Testing (broad internal test team).

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SRDP-524: User Interface Testing

Are there plans for any community user testing, particularly of the user interface?

After discussing your comment, we plan to add dedicated UX testing phases using a mix of selected internal and external users. Broad external community testing will be through the planned training sessions. Internal community will be involved in the development but also in integration and testing phases.

Suggested Action: Update the execution plan add the UX testing phases. Also highlight UX testing portions of these activities.

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SRDP-469: Validation needs to involve stakeholders

Document says that the Validation will be done by the Project Scientist. Validation should also include operations stakeholders.

Agreed, the intention is that the project scientist organizes the correct stakeholders for validation of each phase. Key individuals for each stage have already been identified in the detailed resource planning.

Suggested Action: Update document to read “The Project Scientist is responsible for **organizing** the formal validation and documentation of each phase of the software development, documenting any variance from the requirements for the phase and any defects to be addressed.”



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