

Tuffley Computer Services Pty Ltd

Quality Management System

User Requirements Capture

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1. Introduction

The User Requirements Capture document details the process by which the following activities occur.

- Requirements list is produced by the customer to describe the features and capabilities required by a proposed system.
- Statement of user requirements document is developed based on a requirements list.
- Content is developed.
- Requirements list and statement of user requirements are formatted.
- Review/approval process is performed.

1.1. Scope

The scope of this document is to present a comprehensive guide to the preparation of the requirements capture documents (requirement list and statement of user requirements).

1.2. Objectives

The outcome of using this standard will be to achieve the following.

- To achieve consistency across Requirements Lists which are derived from different sources. The resulting consistency allows for a more objective assessment of the requirements.
- Statement of user requirements which can be effectively used as the basis for the development of a detailed user requirement specification.
- Project staff have the means to identify and follow the processes involved with the Requirements Capture Process.
- To furnish a guide to the format and contents of the Requirements List.

1.3. References & sources

- | | |
|-----------------------|--|
| IEEE Std 830-1984 | Guide to Software Requirements Specifications |
| IEEE Std P1233 - 1992 | Guide for Developing System Requirements Specification |

1.4. Definitions & acronyms

Customer	For the purposes of this Standard, the "Customer" is a collective term which may include end-users, the person accepting the product, the funding organisation, and the managers overseeing the development and implementation of product.
Desirable	Pertaining to requirements that would enhance the software product, but would not make it unacceptable if they were absent.
DFDs	Data Flow Diagrams
FURPS	F unctionality, U seability, R eliability, P erformance & S upportability.
Mandatory	Pertaining to requirements that must be provided in an agreed manner to allow the software product to be acceptable.
Optional	Pertaining to requirements that may or may not be worthwhile.
Requirement	A testable statement of functionality (capability) which must be met or possessed by a system to solve a problem or achieve an objective of the Customer, qualified by measurable conditions and bounded by constraints.
RL	Requirements List
SUR	Statement of User Requirements
SRS	Software requirements specification

1.5. Responsibilities

The customer or customer representative is responsible for the following.

- Committing time and resources to participate in the review of the requirements list and statement of user requirements with the developer.
- Work with the developer and analyst to produce the requirements list according to the format recommended in this standard.

The project manager is responsible for the following.

- Ensuring that all changes to the statement of user requirements, however minor, are documented and controlled in accordance with Project Change Control Process.
- Produce the statement of user requirements according to the format recommended in this standard.
- Consult with the customer in producing the statement of user requirements.
- Conduct walkthroughs and an inspection of the statement of user requirements and gain agreement with the customer.

- Ensure that changes to the statement of user requirements are done in accordance with Project Change Control Process.

2. Standard description

The requirements capture process standard outlines how project staff are to apply the standards dealing with requirements list (RL), statement of user requirements (SUR) and software requirements specification (SRS).

The end product of the requirements capture process is the complete and accurate definition of the functionality of the proposed system. It is a 'top down' process which proceeds from the general to the specific through a series of predefined steps.

This standard gives a detailed outline of the requirements capture process. It discusses how to apply the steps contained in the requirements capture standards.

2.1. Outline of the requirements capture process

This section is a conceptual overview of the requirements capture process. It is included here for reference. Detail of the actual steps is included in subsequent sections.

2.1.1. Overview

Requirements specification capture documents are developed by the following process.

- Major functional aspects of the proposed system are captured. This is done in consultation with the user - resulting in the requirements list (RL).
- System environment and business processes are documented.
- Functions/transactions are identified in the statement of user requirements (SUR).
- Acceptance criteria are identified in the statement of user requirements (SUR).
- Complete specification of all system requirements are prepared and outlined in the software requirements specification (SRS).
- Screen and report contents are identified in the software requirements specification (SRS).
- User acceptance of the software requirements specification (SRS).
- The software requirements specification is issued.

2.1.2.Organisation & staffing

The customer shall provide at least one competent full-time user representative to assist the team who are developing the requirements list, statement of user requirements and software requirements specification.

The user representative shall coordinate the activities of the actual users who are to have input into the requirements capture process. He/she is responsible for ensuring that the requirements documented in the list are complete and correct.

Where a project is quite large, it may be more practical to break the project into major functional areas and for smaller teams comprising both the developer's staff and a user representative to work on each.

The customer shall also provide other user staff who have input into the Requirements Specification documents on an as-required basis.

2.1.3.Review requirements specification documents

The requirements specification documents shall be reviewed by the user representative and the development team representative.

Internal reviews must be approved before the final customer review.

2.1.4.Accept requirements specification documents

The approved requirements specification documents shall be signed by all parties concerned in the place provided on the title page.

The customer shall then review the requirements specification documents and will do one of the following.

- Indicate their acceptance by signing in the space provided on the cover page.
- Raise the problem issue with the developer to identify defects or deficiencies in the Requirements Specification documents.

For large projects, as mentioned above in 'organisation & staffing', projects can be broken down into major functional areas and for smaller teams to work on each area. Where this is the case, and the resulting specification documents are relatively large, it may be more practical for the user representative from each team to be responsible for the acceptance of the documentation generated by that team.

The user representative is walked through the requirements specification - is given the opportunity to consider carefully before signing it.

2.1.5. Issue requirements specification documents

When the customer has accepted the requirements specification documents the project manager shall authorise the issue of the requirements specification documents. The authorised documents become the baseline for design and acceptance testing.

This baseline controls any subsequent amendments and enhancements in the remaining stages of the development cycle.

In large systems the baseline has the potential to become very complicated. While it is always important to use the correct change control, it becomes vitally important when the baseline is very complicated.

2.1.6. Changing the requirements specification documents

If the customer wishes to amend the requirements specification documents after acceptance, they must raise a 'change request'. The amended documents shall be reviewed and accepted as a new release of the requirements specification documents.

Any changes must be documented and controlled.

2.1.7. Traceability matrices

The above process is monitored by a series of traceability matrices. The matrices are as follows.

- **Requirements capture** - the user requirements specified in the requirements list are mapped to the items of the software requirements specification. Traceability through design and testing is documented in separate traceability documents.
- **Design** - the items of the software requirements specification are mapped to the design documentation.
- **Test** - the items of the software requirement specification are mapped to the test procedures and cases.

End of Sample
