Usability, User Centered Design, and Process Standards

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Improving performance

- Make sure the system supports the users' tasks and goals
- Measure Effectiveness, Efficiency, and User Satisfaction
 - Effectiveness quality
 - Efficiency Timing
 - User Satisfaction fulfillment, no frustration, enjoyment, contentment

User Centered Design

 ISO 9241 Part 210 Ergonomics of human-system interaction part 210:Human-centred design for interactive systems.





System Lifecycle

 ISO/IEC 15288 Systems and software engineering – System life cycle process



Validation Process

Stakeholders Requirements Definition Process Stakeholders Requirements Definition Process

Evaluation

Users

User & Organizational Requirements

Verification Process

Architectural Design Process Design Solution

Integration Process

Requirements Analysis Process

Implementation Process

CIF Standards

- ISO/IEC 25063 Context of Use Description
- ISO/IEC 25064 User Needs Report
- 25065 User Requirements Specification
- User Interaction Specification
- User Interface Specification
- 25066 Evaluation Report
- Field Data Report
- ISO/IEC 25062 (summative test report)

Evaluation

Users

User & Organizational Requirements 25063 Context of Use Description

- System Goals
- Stakeholders

 Users characteristics

Tasks

Environments

Evaluation

Users

User & Organizational Requirements 25064 User
 Needs Report

- Identified
- Stated
- Derived
- Implied

Evaluation

Users

Design Solution

User & Organizational Requirements 25065 User
 Requirements
 Specification

- Context of Use
- User Needs

 Relevant UI knowledge, standards, & guidelines

- Effectiveness, efficiency, satisfaction criteria
- Organizational

Evaluation

Users

User & Organizational Requirements User Interaction
 Specification

- Workflow
- Subtasks
- Dialogue Model
- Task specific usability objectives
- Information architecture

Evaluation

Users

User & Organizational Requirements

- User Interface Specification
 - Task & system objects
 - User Interface elements
 - Views
 - Properties, behaviors, & relationships
 - Dialogue techniques

Evaluation

Users

User & Organizational Requirements

- Evaluation
 Report
 - Usability problems
 - Recommendat ions
 - Conformity with user requirements

Evaluation

Users

User & Organizational Requirements • ISO/IEC 25062

 Formal summative evaluation

- Baseline
- Comparison among products

 Field data report

- Actual usage
- Emergent user requirements

Evaluation

Users

User & Organizational Requirements

Validation Process 2506n Field Data Report 25062 CIF Usability Test Reports Context of Use

Stakeholders Requirements Definition Process

Users

Evaluation

Verification Process

25066 Evaluation Report 2506n User Interface Spec

Architectural Design Process Design Solution User & Organizational Requirements

Stakeholders

Process

Requirements Definition

25063 Context of Use Description

25064 User Needs Report

Requirements Analysis Process

25065 User Requirements Spec 2506n User Interaction Spec

Implementation Process

Thank you

- Questions
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As-Is Analysis

Evaluation

Users

Usability Testing Needs

User & Organizational Requirements

User Experience