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| Document ID  **ITSW108** | Title  **DESIGN CHANGES DURING DEVELOPMENT** | Print Date  **mm/dd/yyyy** |
| Revision  **0.0** | Prepared By  **Preparer’s Name / Title** | Date Prepared  **mm/dd/yyyy** |
| Effective Date  **mm/dd/yyyy** | Reviewed By  **Reviewer’s Name / Title** | Date Reviewed  **mm/dd/yyyy** |
|  | Approved By  **Final Approver’s Name / Title** | Date Approved  **mm/dd/yyyy** |

**Policy:** All design changes made to a software product during development shall be managed, controlled, and communicated efficiently and effectively.

**Purpose:** To ensure that design changes during development are handled efficiently and effectively.

**Scope:** All Company software development projects.

**Responsibilities:**

The Project Manager is responsible for reviewing design change requests/ proposals, to determine the appropriate actions to take, and for updating the project schedule accordingly.

The Software Designer is responsible for reviewing design changes and updated system requirements, determining the parts of the system affected by the change, and designing system changes to achieve the new requirements.

The Systems Analyst is responsible for reviewing design changes, determining the parts of the system affected by the changes, and updating the system requirements.

User Management is responsible for reviewing design specifications and, if necessary, submitting change requests in a timely and efficient manner.

**Procedure:**

### 1.0 DESIGN CHANGES - INTRODUCTION

Software systems typically are developed using a top-down design philosophy. Designing from the most general level (requirements) down to the most detailed (programming instructions) typically reduces the frequency with which design errors occur, and the amount of work required to recover from errors and design changes. The lower down in the development cycle that changes are made, the more complicated and time consuming those changes become.

### 2.0 DESIGN CHANGE REVIEW

* 1. Changes typically originate in the user area, though the software design team may initiate changes. A change request shall be submitted using ITSW108-1 DESIGN CHANGE REQUEST FORM. At a minimum, ITSW108-1 should capture the project name, project number, project manager’s name, the name of the requestor, request date, resolution requested by date, description of and reason for change, impact on scope and/or deliverables, impact on time and cost, impact on resources and quality, change accepted or rejected, and sign-off signatures from those in charge.
  2. The Project Manager shall consider changes with respect to problems noted on ITSW107-3 PROJECT TEST PROBLEM REPORT.
  3. The Project Manager, Systems Analyst, and Software Designer shall review each proposed design change and determine what action to take. Questions to consider include:
* Do the benefits of the change outweigh its costs?
* Can the change be implemented in an acceptable amount of time?
* Is the change functionally necessary?
* Can the change be implemented in a subsequent release of the product?

2.4 Depending on the scope of the request, the Project Manager may be required to consult with IT Management and determine the impact of requested changes on ITAD101-1 INFORMATION TECHNOLOGY PLAN.

### 3.0 DESIGN CHANGE IMPLEMENTATION

* 1. When a design change is approved, the Software Designer shall identify all software components affected by the change. The programmer halts development work on those components.
  2. The Software Designer shall estimate potential delays caused by the change, add this information to ITSW108-1, and forward ITSW108-1 to the project’s Systems Analyst.
  3. The Systems Analyst shall perform a new systems analysis on all parts of the system affected by the change and update project documentation, in accordance with ITSW103 SYSTEMS ANALYSIS. The Software Designer shall use the analysis to rework the design of the affected system components and update related project documentation, in accordance with ITSW104 SOFTWARE DESIGN.
  4. The Project Manager shall rework the project schedule and submit ITSW108-1 to User Management for its approval.
  5. If the requested changes are approved, the Project Manager shall notify all people affected by the change (such as managers, project team members, and the sales staff) of the design change and its impact on the project schedule.

**Forms:**

* ITSW108-1 DESIGN CHANGE REQUEST FORM

**References:**

* 1. **ISO/IEC 12207:2008 – SYSTEMS AND SOFTWARE ENGINEERING – SOFTWARE LIFE CYCLE PROCESSES**
  2. **IEEE 12207-2008 – SYSTEMS AND SOFTWARE ENGINEERING – SOFTWARE LIFE CYCLE PROCESSES**

This ISO standard describes the major component processes of a complete software life cycle and the high-level relations that govern their interaction. It establishes a software life cycle architecture based on two principles, modularity of processes and responsibility for processes. There are three process classes in the ISO software life cycle: primary (such as acquisition and operations); supporting (such as documentation and configuration management); and organizational (such as infrastructure and training). Each life cycle process is made up of activities, and each activity is further subdivided into tasks. The standard is based on ISO quality management principles.

The IEEE version of 12207 is more closely aligned with the ISO standard than it was in previous versions.

For more information, visit the ISO web site at <http://www.iso.org/iso/catalogue_detail.htm?csnumber=43447> or the IEEE web site at <http://standards.ieee.org/findstds/standard/12207-2008.html>.

**Revision History:**

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| **Revision** | **Date** | **Description of Changes** | **Requested By** |
| 0 | mm/dd/yyyy | Initial Release |  |
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**ITSW108-1 DESIGN CHANGE REQUEST FORM**

Request Date:

Design Change ID:

Project Name and Number:

Project Manager:

Change Requestor:

Request Resolved By (date):

Description of Request (reason for change):

Anticipated Impact on Scope and/or Deliverables:

Anticipated Impact on Time and Project Cost:

Expected Impact on Resources and Quality:

Change Request: 🞏 accepted 🞏 rejected

User Management: Date:

IT Project Management: Date:

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