Project Configuration Management

Project Management Institute (PMI)
Practice Standard for

Configuration Management
Project Configuration Management

What we will cover:

- Introduction
- Relationship with other standards
- Configuration Management Planning
- Configuration Change Management
- Configuration Status Accounting and Metrics
- Configuration verifications and audits
- Additional Source of information on CM
Configuration Management: Introduction

- Definitions
- Relationship with other standards
- The purpose of the standard
- Who should care about using CM standard?
Configuration Management: Introduction

- **Definitions**
  - CM is part and parcel of the overall PM Methodology (see Big Picture chart)
  - CM is defined (by EIA 649) as a management process designed to establish and maintain consistency between a deliverable’s (performance, functional and physical) characteristics and it’s requirements (design and operational information) all through the project.
Configuration Management: Introduction

- Definitions
  - Configuration Item (CI)
    - Any aggregate deliverable (e.g. hardware or software component etc)
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    - Any aggregate deliverable (e.g. hardware or software component etc)
# Knowledge Area and Process Group Relationship

<table>
<thead>
<tr>
<th>Process Group/ Knowledge Area</th>
<th>INITIATING</th>
<th>PLANNING</th>
<th>EXECUTING</th>
<th>MONITORING &amp; CONTROLLING</th>
<th>CLOSING</th>
<th>PROF. RESP.</th>
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- **INITIATING**
  - Develop Project Charter
  - Develop Preliminary Project Scope Statement

- **PLANNING**
  - Develop Project Management Plan

- **EXECUTING**
  - Direct and Manage Project Execution

- **MONITORING & CONTROLLING**
  - Monitor and Control Project Work
  - Integrated Change Control

- **CLOSING**
  - Close Project

- **PROF. RESP.**
  - X

- **SCOPE**
  - Scope Planning
  - Scope Definition
  - Create WBS

- **TIME**
  - Activity Definition
  - Activity Sequencing
  - Activity Resource Estimating
  - Activity Duration Estimating
  - Schedule Development

- **COST**
  - Cost Estimating
  - Cost Budgeting

- **QUALITY**
  - Quality Planning

- **HUMAN RESOURCE**
  - Human Resource Planning

- **COMMUNICATIONS**
  - Communications Planning

- **RISK**
  - Risk Management Planning
  - Risk Identification
  - Qualitative Risk Analysis
  - Quantitative Risk Analysis
  - Risk Response Planning

- **PROCUREMENT**
  - Plan Purchases and Acquisitions
  - Plan Contracting
  - Request Seller Responses
  - Select Sellers

- **CLOSING**
  - Contract Administration
  - Contract Closure

- **PROF. RESP.**
  - X
Q & A
Configuration Management: Introduction

- Relationship with other standards
  - EIA/IEEE 649 (National consensus for CM practices)
  - IEEE 1042 Guide to Software CM
  - ISO 10007 CM in quality management.
Configuration Management: Introduction

The purpose of the standard

- Provides guidance as to:
  - Appropriate tools and processes
  - Optimal design for a well functioning CM system

- Accelerates organizational learning
  - Improved organizational process assets
  - Improved productivity.
Configuration Management: Introduction

- From a deliverable standpoint:
  - Reproducibility
  - Traceability
  - Accountability
  - Coordination
Configuration Management: Introduction

Who should use CM?
- Senior Executives
- Project Managers
- Project Team members
- Consultants in PM field
- Stakeholders
Q & A
Configuration Management: Configuration Identification

- Project Artifacts
- Artifact Structure & repository (PM plan)
- Item Identification
- Taxonomy or Nomenclature
Configuration Management: Configuration Identification

- Artifact Structure & repository (PM plan)
  - Format
  - Access
  - Security
  - Availability
  - recovery
Configuration Management: Configuration Identification

- Project Artifacts
  - Any information to entrust to PCM
  - Is the PM plan
Configuration Management: Configuration Identification

- Item Identification
  - All baselines termed Configuration Items (CIs)
  - Baseline management
Configuration Management: Configuration Identification

- Taxonomy or Nomenclature
  - Use meaningful acronyms for your environment
  - Cataloguing (dates Stamp & serialization)
Configuration Management: Configuration Identification

- Project Artifacts
- Artifact Structure & repository (PM plan)
- Item Identification
- Taxonomy or Nomenclature
Configuration Management: Configuration Change Management

- Identification of CIs
- Process (how it is designed to work)
- Control
- Assessment & Approval
- Implementation
- Verification & Acceptance
- Closure
Configuration Management: Configuration Change Management

- Identification of CIs
  - Identifies CIs for inclusion in CM
  - Details in Project Change Control Plan
  - Part of Scope statement
Configuration Management: Configuration Change Management

- **Process (how it is designed to work)**
  - Detail definition of how CM will happen on project
  - Includes process & procedures
  - Configuration management system selected
Configuration Management: Configuration Change Management

- Control
  - Track change requests over life time
  - Re Planning (change request ramifications)
Configuration Management: Configuration Change Management

- Assessment & Approval
  - PM’s full responsibility
  - Can bypass CCM board
Configuration Management: Configuration Change Management

- Change Implementation
  - Documented approvals
  - Use of relevant CM Tools & techniques
Configuration Management: Configuration Change Management

- Verification & Acceptance
  - Of change request decision
  - Sign off by appropriate authority
Configuration Management: Configuration Change Management

- **Closure**
  - All change requests that impact a deliverable must be closed before scope verification.
Configuration Management: Configuration Change Management

- Identification of CIs
- Process (how it is designed to work)
- Control
- Assessment & Approval
- Implementation
- Verification & Acceptance
- Closure
Q & A
Configuration Management: Configuration Status Accounting & Metrics

- Information Repository
- Reporting
- Analysis
Configuration Management: Configuration Status
Accounting & Metrics

- Information Repository
  - Repository with controlled access
  - Typically electronic today
Configuration Management: Configuration Status
Accounting & Metrics

- Reporting
  - Status (audit trail)
  - Metrics (estimate of CI effort)
  - Benchmarking (with other projects)
  - Performance measurements
  - Delivering operational data (quality tools & techniques)
  - Reports (of all kinds)
Configuration Management: Configuration Status Accounting & Metrics

- Analysis
  - Primarily of organizational process assets growth
  - Process metrics evolution
Configuration Management: Configuration Status
Accounting & Metrics

- Information Repository
- Reporting
- Analysis
Configuration Management: Configuration Verification & Audits

- Verification
- Audit
- Both (Verification & Audit)
Configuration Management: Configuration Verification & Audits

- Verification
  - Compares requirements with initial, interim & final testing results.
Configuration Management: Configuration Verification & Audits

- Audit
  - CI handling as per documentation
Configuration Management: Configuration
Verification & Audits

- Both (Verification & Audit)
  - Planning
  - Executing
  - Monitoring & Reporting
  - Communicating results
Configuration Management: Configuration Verification & Audits

- Verification
- Audit
- Both (Verification & Audit)
Configuration Management:
Take Home Assignment

- Compare and Contrast any two Configuration Management (CM) Methodologies
  - Maximum two pages
  - Due May 21st 2008
  - Submit by email to hful@technologycenterinc.com
Configuration Management:
Links to Other CM Methodologies

- http://www.icmhq.com/
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