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- Does your organization have a well defined methodology/process?
- Does your organization use OOA/OOD?
- Does your organization use UML?

Agenda

- What is RUP?
- RUP Fundamentals
- Phases
- Product "features"
- Summary
- Questions



Process/Methodology Product Presentation

- No UML bashing
- No rhyming

Why RUP™ at SSQA?

- Most organizations have no well defined software development process
- Software quality depends on the full SDLC, not just testing
- The (RUP™) Knowledge base allows development teams to gain the full benefits of the industry standard UML
- RUP[™] covers all UML models
- RUP[™] is hot; the latest silver bullet...



What is RUP™?

- A "software engineering process" (methodology)
- A knowledge base "process product"
 - CD to create web site
- UML model focused, not "paper documents" (but...)



- Configurable process/product
 - Recognizes and supports variety of different project types
 - Support for tailoring and configuring project web sites
- Project oriented



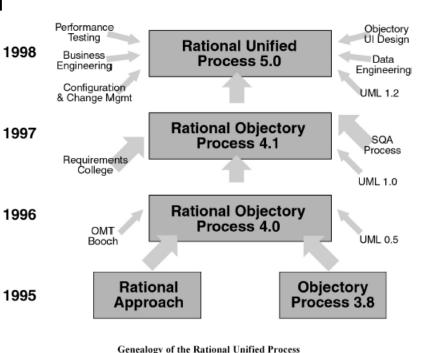
3 Flavors of RUP

- Generic not dependant on specific technology
- Microsoft Web Solution Technology
 - Additional templates, guidelines etc
- IBM Websphere[™] Technology

History

Methodology by Merger
 & Acquisition

- Objectory Process created in '80s
- Rational Approach created in '80s
- Acquisition of RequisitePro
- IBM acquires Rational





Why Should You Care About RUP™?

- Your organization is at SEI/CMM Level 1 "Ad Hoc"
 - Provides an excellent path to CMM Levels 2 and 3
- You need the basics for a "green field" effort
- You need to add OOA/OOD to your current process/methodology
- Management wants to know when you're going to use the latest silver bullet



RUP[™] Fundamentals

- RUP is object and process oriented
 - Data takes a back seat
- Architecture is "key to success"
 - Emphasizes need for prototyping of core functionality, not just UI
- Iterative development
- Use Cases are primary requirements specification



4 Phases

- Inception
- Elaboration
- Construction
- Transition



Inception

- Establish business case and business models
- Establishes initial "vision", high level requirements via "business" use cases
- Create stakeholder "buy in"
- Evaluate risks and return



Elaboration

- Detailed requirements
- Architecture and prototype
- Design



Construction

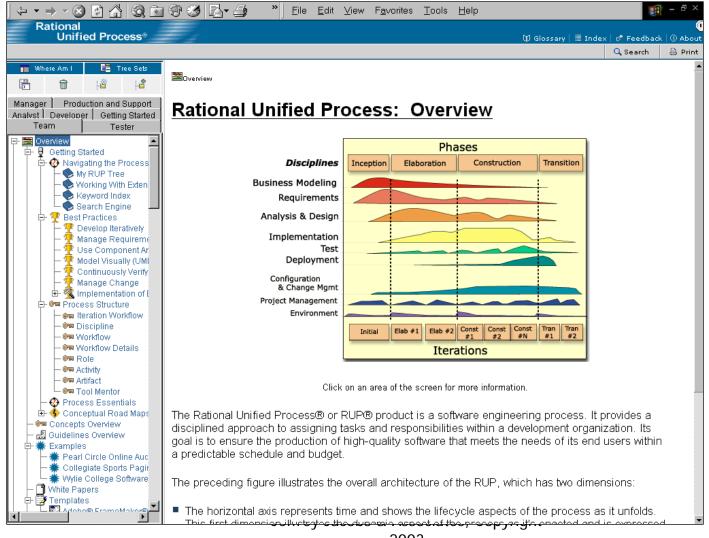
Coding and testing



Transition

- Putting the product in the user's hands
- Highly variable, depending on project/product
 - Data migration
 - Training
 - Parallel Operations
 - Beta testing
 - Etc.

Overview of RUPTM (Organization)





Best Practices

- Develop software iteratively
- Manage requirements
- Use component-based architectures
- Model visually
- Continuously verify quality
- Control changes



Key Concepts of RUP™

- Organized by discipline
- Workflow model of process for a discipline
- Workflow Details 2nd level detail of workflow, detailing activities, roles and artifacts
- Role who performs an activity
- Activity defined piece of work that results in an artifact



More Key Concepts

- Artifact a deliverable, may be document, model, code, etc
 - Templates and examples for many artifacts
- Tool Mentor guide on using Rational Tools for RUP™



Analyst Roles

- Business-Model Reviewer
- Business Designer
- Business-Process Analyst
- System Analyst
- Requirements Specifier
- Test Analyst
- User-Interface Designer



Developer Roles

- Software Architect
- Designer
- User Interface Designer
- Capsule Designer
- Database Designer
- Implementer
- Integrator

Managers

- Project Manager
- Change Control Manager
- Configuration Manager
- Test Manager
- Deployment Manager
- Process Engineer
- Management Reviewer



Production and Support

- Technical Writer
- System Administrator
- Tool Specialist
- Course Developer
- Graphic Artist

Tes

Testers

- Tester
- Test Analyst
- Test Designer



Additional Roles

- Review Coordinator
- Technical Reviewer
- Stakeholder



Disciplines

- A collection of related activities that are related to a major area of concern within the overall project
- Disciplines span phases



RUPTM's Disciplines

- Business Modeling
- Requirements
- Analysis and Design (Analysis <> Requirements)
- Implementation
- Test

- Deployment
- Configuration and Change Management
- Project Management
- Environment

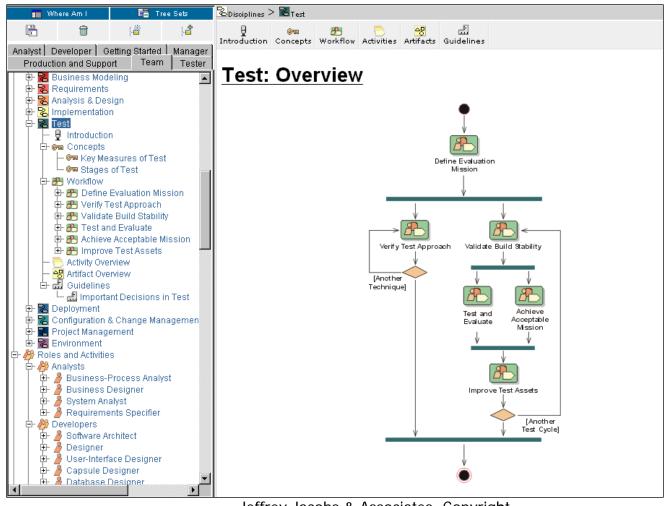


Each Discipline is Composed of:

- Overview
- Introduction
- Concepts
- Workflow the high level activity diagram (process flow)
- Workflow detail second level process

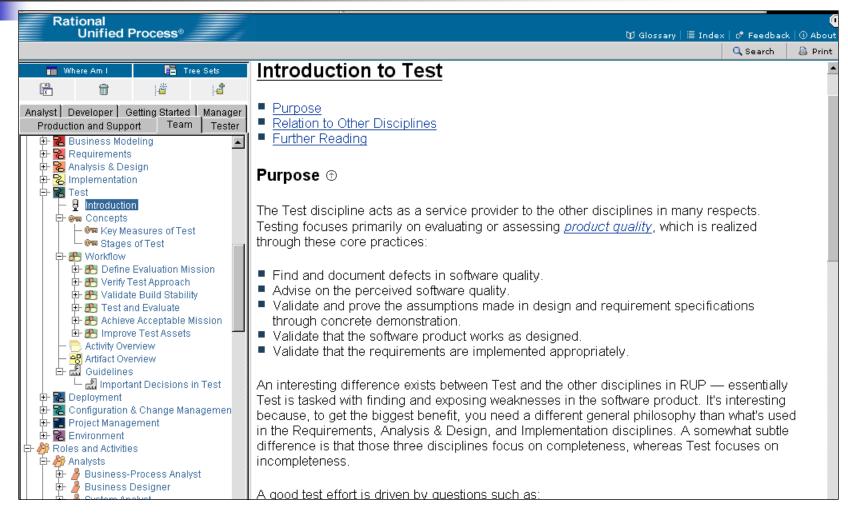
- Activities actions performed by roles
- Artifacts deliverables
- Guidelines tutorials, checklists, etc

Discipline Overview



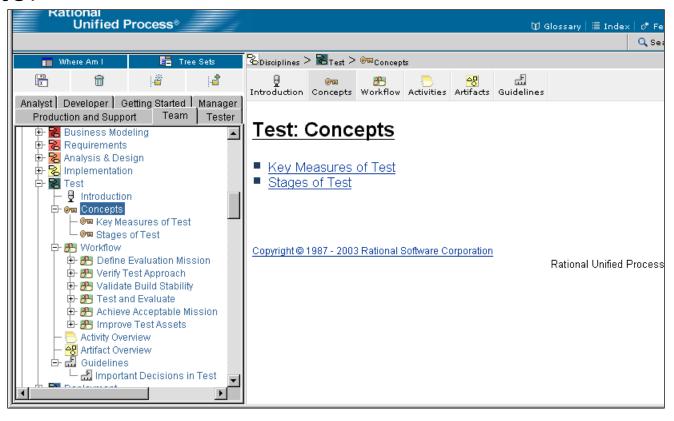
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Introduction

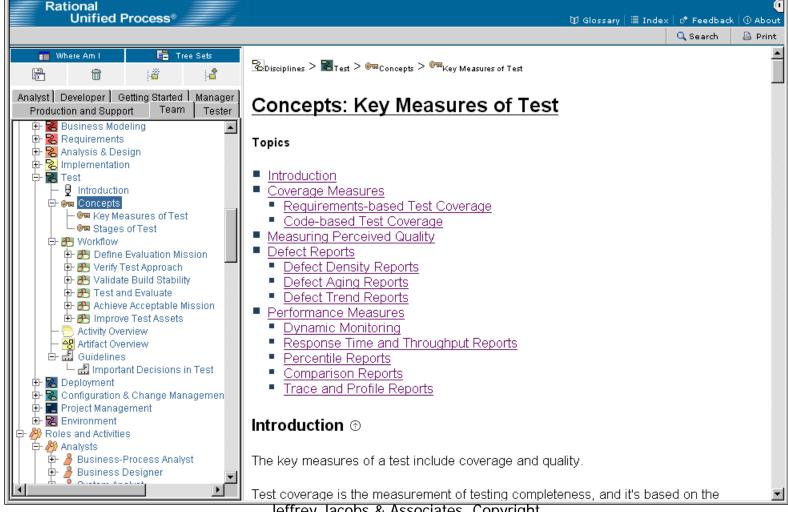


Concepts

Links to tutorials, explanation, white papers, etc.



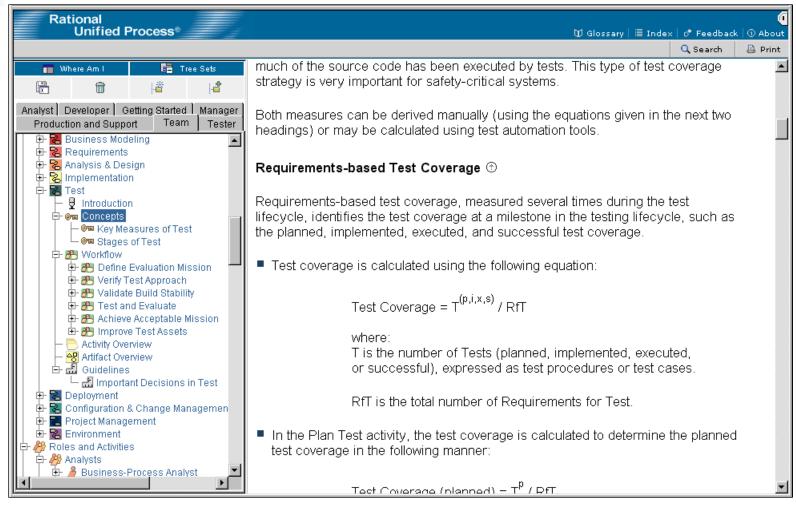
Concept Example



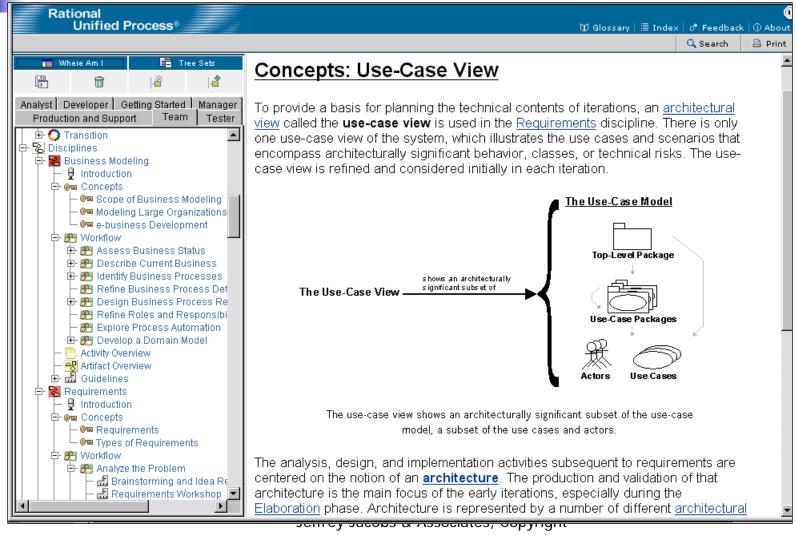
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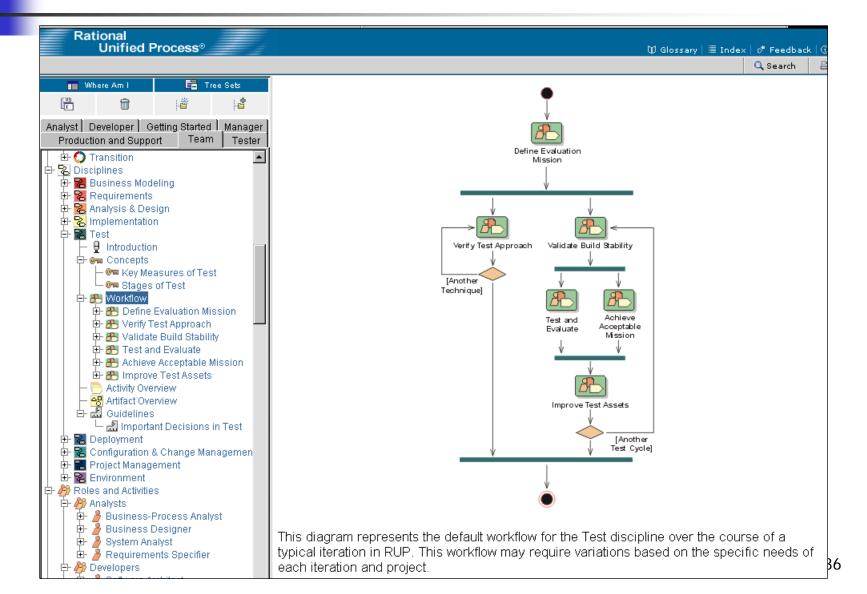
More Concept



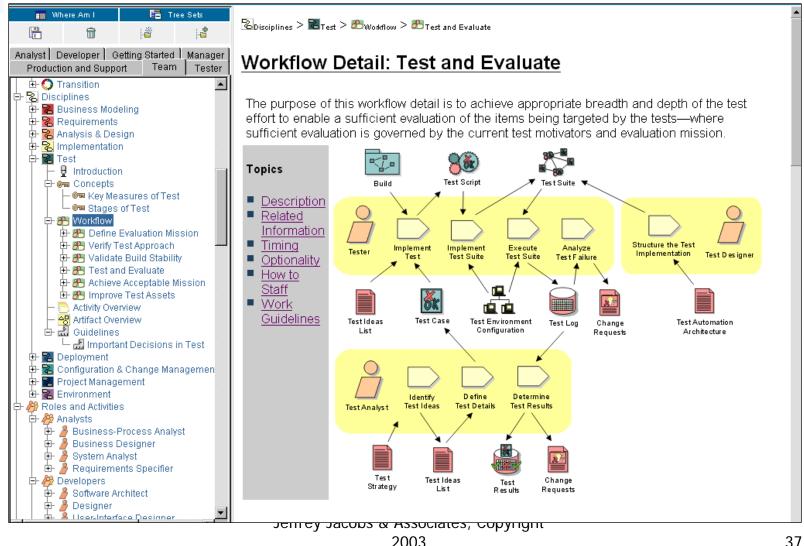
Everything is Use-Case Driven



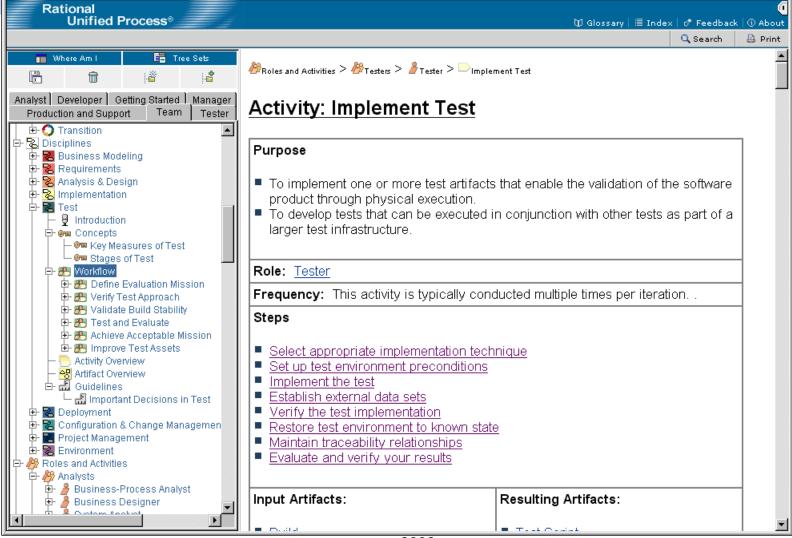
Workflow



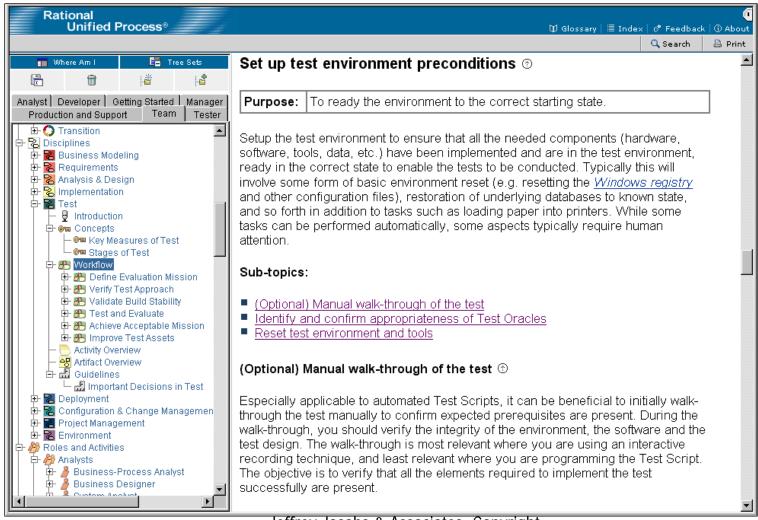
Workflow Detail



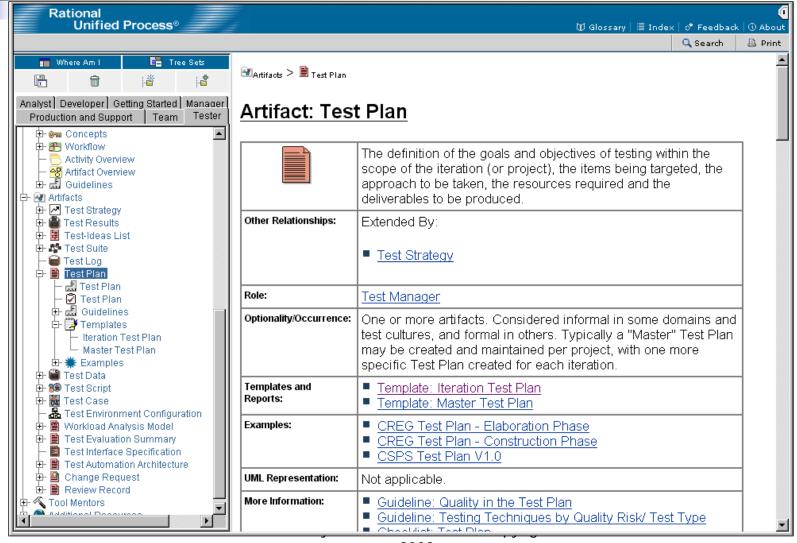
Activity



Activity Step



Artifacts May Be Documents, Models, Code, Etc. (Note change in tree)

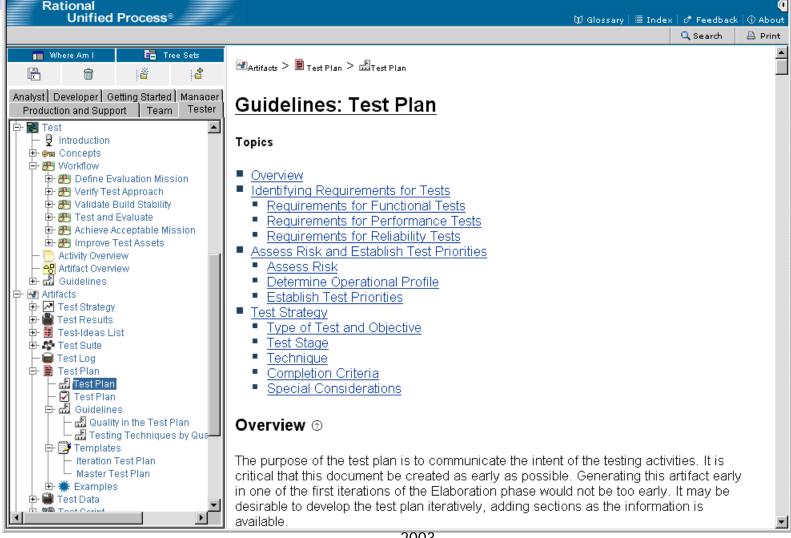




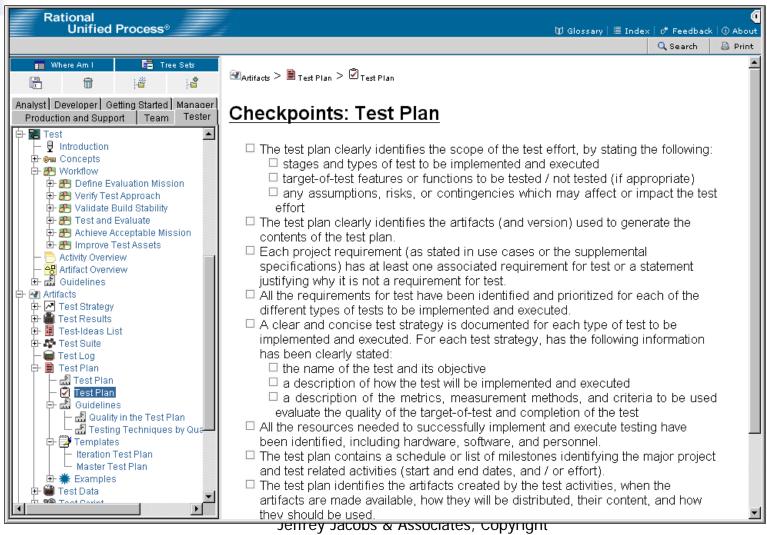
Document Templates

- Templates for document artifacts available in a variety of formats
 - Microsoft Word
 - HTML
 - Framemaker
 - Rational SODA
- Iteration Test Plan Template

Guidelines



Checkpoints for Quality Reviews

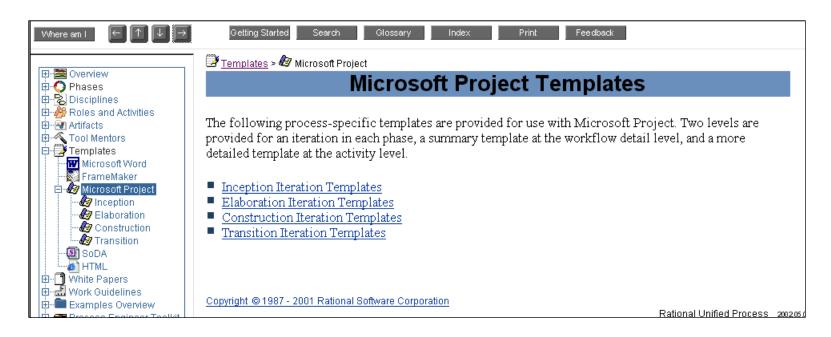




More Stuff

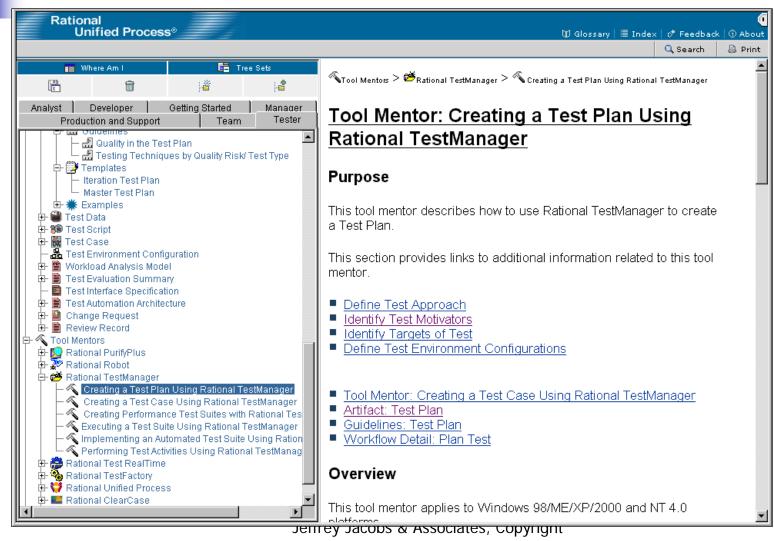
- Project Management Templates
- Tool Mentors
- Sample Projects
- Reference/bibliography

Project Management Templates

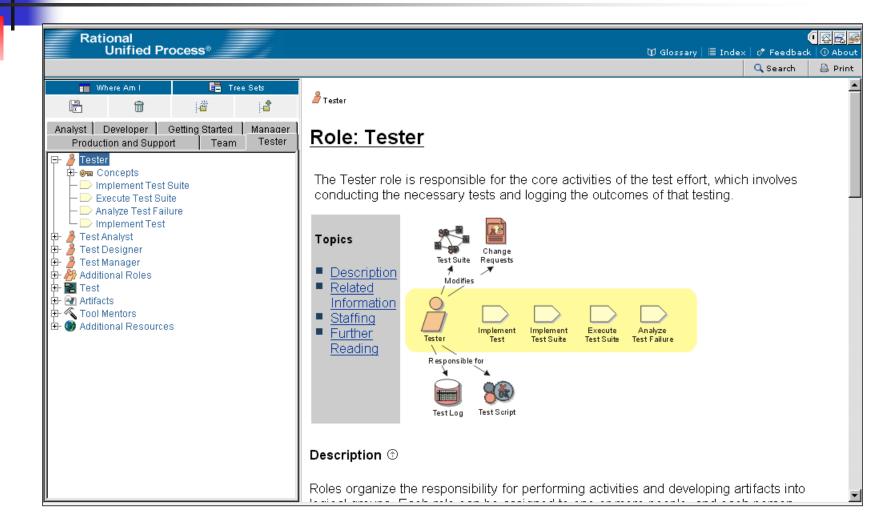


- Summary MS Project Example
- Detail MS Project Example

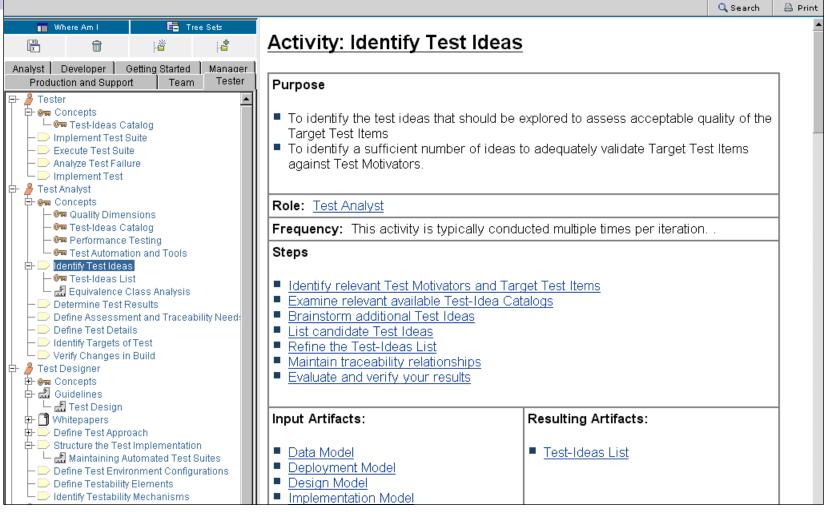
Tool Mentors - How to Use Rational Tools in RUP™



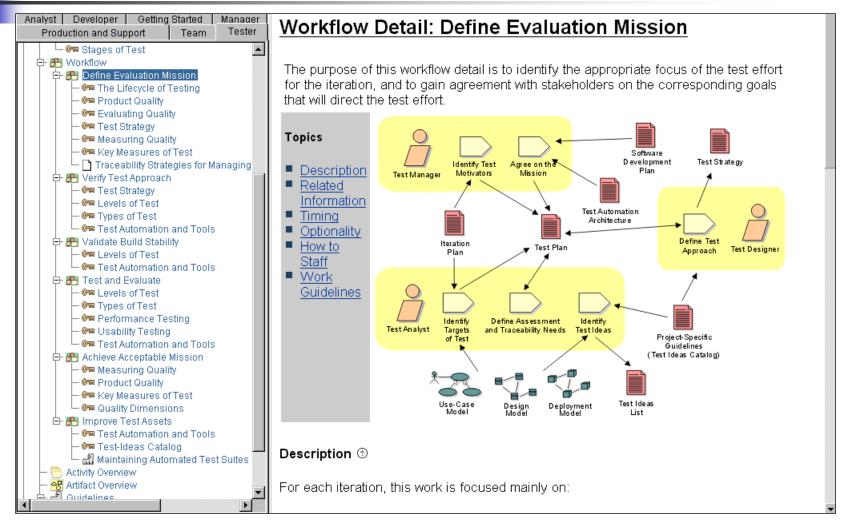
Tester Role



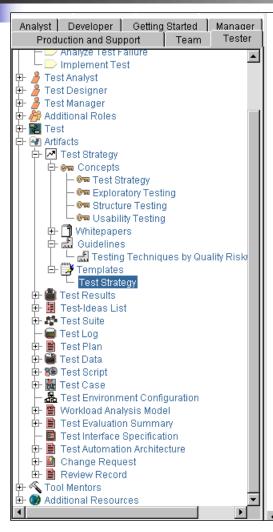
Tester Role Examples



Test Workflow Details



Test Artifacts



Test Strategy

Version <1.0>

[Note: The following template is provided for use with the Rational Unified Process (RUP), and is designed for use in conjunction with the detailed guidance provided within RUP. As with most of the templates provided with RUP, this template should be customized to suit the context of the specific project it will be used on.]

[Note: text such as this you are currently reading—enclosed in square brackets and displayed in blue italics (style=InfoBlue)—is included to provide guidance to the author and should be deleted before publishing the document. A paragraph entered following this style will automatically be set to normal (style=Body Text).]

Revision History

Date	Version	Description	Author
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Table of Caustausta

Summary

- Forms solid basis for improving software development process, particularly for ad-hoc, Level 1 organizations
- Provides basis for incorporating OOA/OOD/UML into current software development process
- Provides basis for development using IBM,
 Rational and Microsoft technologies
- 30 day on-line evaluation available, http://www.rational.com

Questions