



VVRTS...

Verification Validation Reporting and Tracking System



ABOUT VVRTS

The purpose of the **Verification and Validation Reporting and Tracking System** application is to provide system development professionals with tools to assist in testing (hardware, software and documentation), problem reporting and tracking. **VVRTS** is a powerful and simple to use Web-based tool that assists in:

- Easily creating Test Cases, Test Procedures and detailed Test Steps that are directly associated with Project/Product requirements and individual product components or features.
- Tracking Product Defects and Test Case execution/completion status.
- Simultaneous access by “approved” users such as Customers, Engineers, Project Managers, Marketing, Senior Management, etc.
- Quick view of the status of test and defect workflow for each life cycle stage.
- Integrating requirements with test and problem reporting activities for easy traceability, update, status accounting and general project management functions.
- Easy and efficient communication, Change Management, Risk Management, and determination of product/project defect Status Accounting among all project participants without relying on numerous emails and other forms of communications.
- Ensuring compliance to ISO 9001:2000 Standard requirements in all aspects of system development life cycles.
- Supporting multiple Projects/Products, Customers or Accounts, Project Participants, etc.



VVRTS allows companies to become compliant to ISO 9001:2000 quicker and easily prepare for Quality Management Reviews and Independent External Audits.

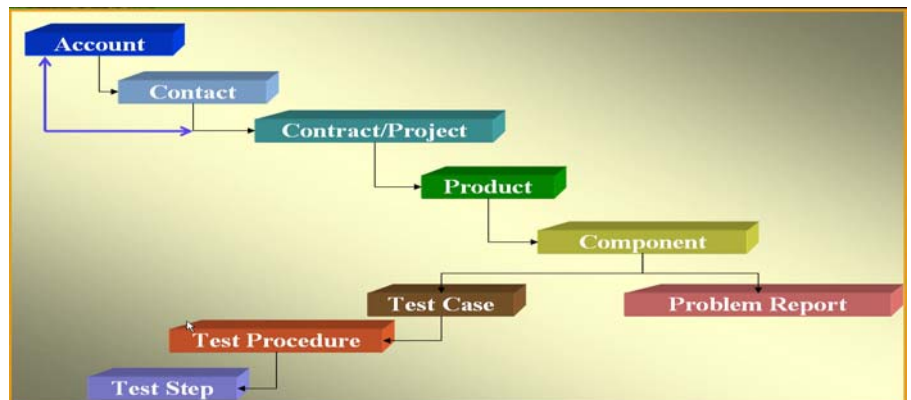
3 Products																	
Name	0.0 Not Defined	1.0 Submitted investigation	2.0 Under investigation	2.1 Duplicate	2.2 Cannot Reproduce Defect	2.3 Deferred	2.5 Deferred - 3rd party	2.6 Not a bug	3.0 Fix In Progress	4.0 Fixed In Development	5.0 Dev Unit Test	6.0 Fix Implemented on Test	7.0 Ready for Regression Test	8.0 Repr. Test in progress	8.5 Resubmitted to Dev	9.0 Reg. Test Passed	10.0 Produ Distrib
Demo Product 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Demo Product 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Demo Auto z100	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0

The above Table depicts the Defect Workflow Status across three Projects

The **VVRTS** Application is a Web-based solution employing J2EE* and Java* technology and is designed on a modular basis as shown here.

Based on experiences, best practices and international standards, VVRTS has been designed to integrate all the business objects and accommodate testing, problem reporting and tracking activities through any stage of the system development life cycle.

(*) J2EE and Java are registered of Sun Microsystems Inc. trademarks



FEATURES:

The features of the **VVRTS** application include but are not limited to:

- Platform Independence
- Simple User Interface Screens
- Short Learning Curve
- Specific Fields for ISO 9001:2000 Compliance
- Compliance with IEEE Standard 1012 Verification and Validation
- Support for Multiple Accounts, Users, Roles, Contracts and Projects with built in security
- Multiple Product and Multiple Component (feature) Recording, Reporting and Tracking
- Test Case Creation with Entry Criteria
- Test Procedure Creation with Entry/Exit Criteria
- Test Step Creation with Entry/Exit Criteria
- Linking Test Procedure to a requirement or an existing (previously reported) Defect
- Creating a new Defect linked to a Test Procedure
- Self Contained Log System, and Test Case and Defect History recording
- Simple customization of User Administration, Workflow, Field Selections and Field Definitions, etc.
- Pre-Built Reports for Defect and Test Status conforming to ISO requirements for every Product and Product Component in CSV (comma separated value) and PDF formats
- Automatic Email & CC Management System
- HTTP Cookie Management System for easy navigation between Web pages

The screenshot shows the 'Entering a New Test Procedure' form. At the top, it says 'Created By: Bob Kessler' and 'Date: Wed, 17 Aug 2005, 02:37 PM'. There is a 'Modify Test Procedure' button. Below is a table with 6 steps:

#	Step Description	Expected Output
1	In the left pane (Tree Menu) select any Component (click it)	Middle Display Pane opens displaying the Problem Reports and Test Cases for that Component.
2	Click on any Test Case in the Name Column of the left Case Table display.	1. When Mouse hovers if the name will change color from Blue to Red. 2. Upon clicking on name , Test Case Information Page Opens.
3	In the displayed Test Procedures Table, Click on any Test Procedure name in the 'Title' column.	1. Mouse hovering over name will result in name changing color from Blue to Red. 2. Test Procedure Information Page Opens showing Test Procedure steps Table.
4	1. Click on "Add Test Step" button. 2. Enter a number in "Sort Order" Field and enter a description and expected output in the "Description" and "Expected Output" fields respectively. 3. Click on "Create Test Step" button.	1. "Create A New Test Step" page opens 2. Fields are filled in. 3. A new test step is added in the Test Steps Table of the Test Procedure Information Page.
5	Repeat step 4 a number of times (e.g. 3)	There should be added steps for each time step 4 was performed
6	not a step	none

Below the table is an 'Add Test Step' button. Underneath is a section for '5 Linked Problem Reports' with a table of reports. At the bottom, there is a '1 Tests' section with a table of test results and an 'Enter Test Results' button.

The **VVRTS** application aids in performing Validation and Verification functions and it can be used in all project phases for overall project and product management.

Functions - By Typical Project Life Cycle:

- **Requirements Phase:**
 - Verify that system and software requirements are correct, complete, traceable and testable
 - Verify test plans and Acceptance Entry and Exit Criteria are sufficient to validate system requirements and operational needs
 - Ensure testing methods are sufficient to verify and validate software requirements
 - Verify that correct software development, management, and support processes are in place
- **Design Phase:**
 - Verify that the design will satisfy all requirements
 - Ensure test plans and test environments are sufficient to verify and validate system requirements
- **Coding Phase:**
 - Verify that test cases trace to and cover system requirements
 - Verify that test cases, expected results, and evaluation criteria fully meet testing objectives
 - Analyze selected unit test plans and results to verify full coverage of logic paths, range of input conditions, error handling, etc.
- **Test Phase:**
 - Verify correct disposition of test anomalies
 - Validate test results versus acceptance criteria
 - Verify tracing and successful completion of all test objectives
- **Operational Phase:**
 - Verify that regression tests are sufficient to identify adverse impacts of changes

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