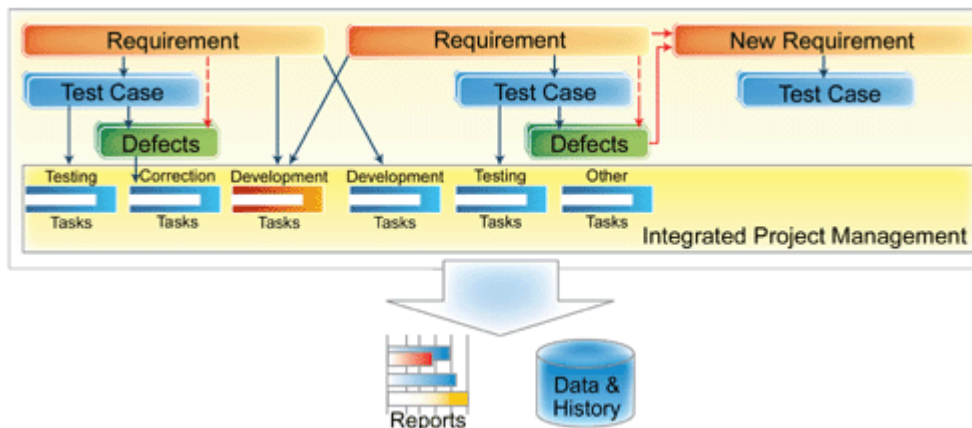# Defect Management Module

Introduction:

The Defect Management Module is an integrated component in RIQTek Manager that allows building of best practices, such as creating new requirements to eliminate defects, supporting continuous testing, tracking relevant test cases, etc. The module contains a collection of test cases that enables the user to add, validate, analyze, correct, verify and trace defects and associated results. The module also allows users to create and automate notifications and approval functions to implement corrections.

Description:

The Defect Management Module is an integrated component in RIQTek Manager that allows building of best practices, such as creating new requirements to eliminate defects, supporting continuous testing, tracking relevant test cases, etc. The module contains a collection of test cases that enables the user to add, validate, analyze, correct, verify and trace defects and associated results. The module also allows users to create and automate notifications and approval functions to implement corrections.

Designed to support the Iterative Method and best practices, this module allows a user to create defect reports through test cases, which assists a user with analyzing the effectiveness of test coverage. Defect reports are also managed under the Defect Management Module, where a set of role-based Web pages assist users in handling defect reports in various states. For example, the **Confirm Defects** Web page assists managers in analyzing defects, the **Correction** Web page assists developers in updating correction reports, and the **Verification** Web page assist testers in confirming verification reports.

All defect reports that require action from the user are centralized under the **ToDo List** Web page where the typical operations can be performed.

Information obtained through the correction of defects is organized into folders for easier access and locating of the reports. A few samples of the folders in this module are:

- The **Details** folder contain attributes of the defect, such as description of the defect, environment that the defect was detected in, self-defined data fields, etc. Data fields with the ▨ symbol can contain HTML text. User can click on the symbol to use an on-line HTML editor. It is possible to add hyperlinks that point to Web pages, where information of the defect can be found, such as the result Web page of an automated testing. Users may also attach documents.

- The **Relevant Test Cases** folder assists developers in adding test cases to increase test coverage. The test cases added here are also managed under the Testing Management Module.
- The **Relevant Request** folder assists developers in adding relevant requirements that assist in preventing similar defects from occurring in future releases. Request reports added here are also managed under the Requirement Management Module.
- Correction and verification tasks are added under the **Schedule** folder. Users can add new tasks or associate the defect report with existing tasks. Mesh relationship is supported between tasks and components in the development lifecycle. A task can be associated with multiple defect reports. All tasks are managed in the **Manage Plan** Web page. It is an integrated project management facility, where users can centralize and manage planned and unplanned tasks.
- The **History** folder tracks changes made to the defect report and can be used for auditing.
- The **Notes** folder in allows written discussion to be logged about the defect.

The Defect Management module is also integrated with the Testing Management Module via the **Relevant Defect** folder of a test case. It allow testers to add relevant information about defect that are detected when running the testing procedures.

The workflow in defect reports cover the natural steps of a correction process, thereby assist user to identify status and ownership. A brief description of the steps is provided below:

Step 1 Validating
The **Validating** status in the workflow is the state where the defect is being reproduced and validated. If validation is not required, manager can click on the **Accept** button, the report will skip **Validating** and **Analyzing** status and the system will ask for assignment on correction tasks.

Step 2 Analyzing
This is a buffer state before **Correcting** state. If users create a defect report and decided to correct it right away, the report will change to the **Analyzing** status, where correction tasks can be assigned.

Step 3 Correcting
When the defect is ready for correction, managers can assign correction task by clicking on the **Accept** button. After an assignee has received the notification and then worked on it, the assignee can enter correction reports using the **Correction** Web page. Managers or task Affirmant can validate correction tasks using the **Validate Correction** Web page. The task Affirmant can be a peer-reviewer who will perform a code review.

Step 4 Verification
After the validation is completed, the user has an option to assign testing tasks to verify the correction result. The tester can use the **Verification** Web page to process verification reports. Managers or task Affirmant can validate verification results using the **Val. Verification** Web page.

Step 5 Close
The **Fixed** status in the workflow is the state where all tasks under the **Schedule** folder of the defect report have been validated by the task Affirmant. Managers can then close the defect report using the **Close** button.

Screen capture (shown below):
1. Visual workflow assists with building the common ground for communication among members.
2. Folders in a defect report.

3. User can attach multiple documents
4. Frequently used buttons are shown at the left of the arrows. Special operating buttons can be shown by click on the arrows.
5. There is an option to change the status of the report at any time. To operate, click on the arrow.
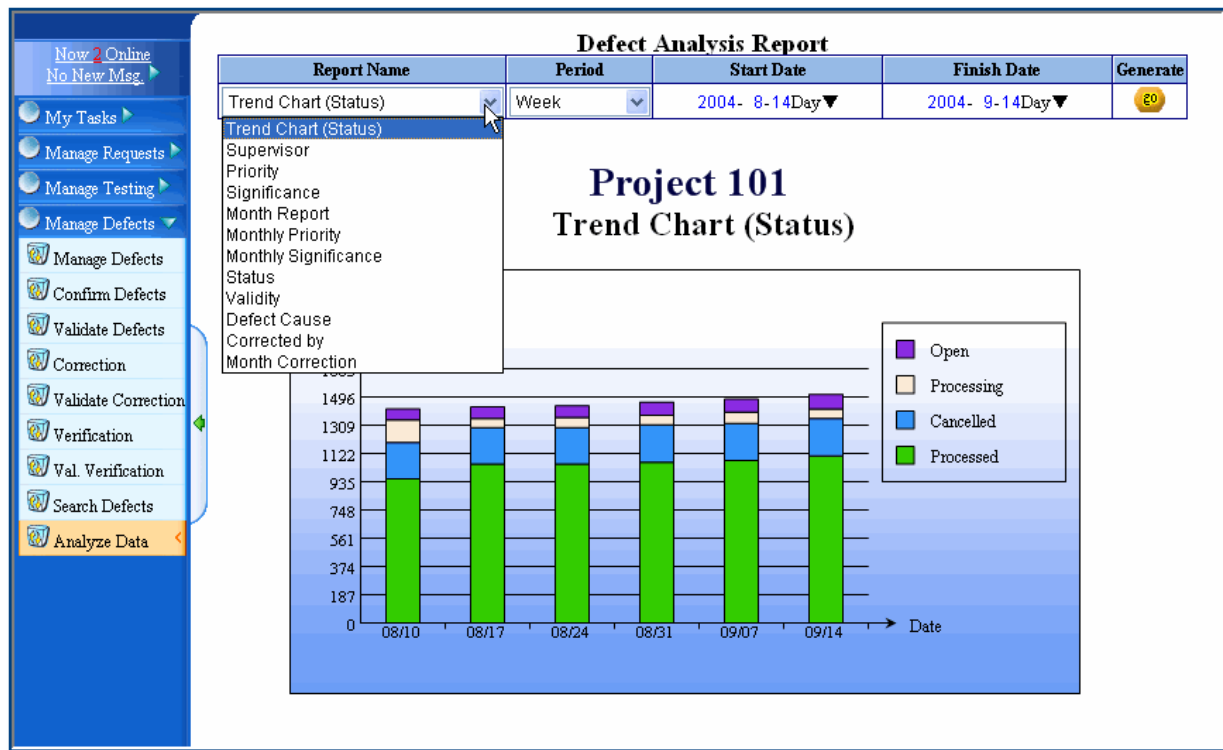

Data Analysis

RIQTek Manager comes with multiple ways to analyze data. For analyzing data in the defect management module, user can use the **Analyze Data** Web page. For example, the Trend Chart (Status) Web page provides an overview on how fast defect reports are created, processed and closed.

RIQ Technology LLC - RIQTek

About RIQTek:

RIQTek is leading software provider for application lifecycle management. RIQTek's software product, RIQTek Manager, truly integrates requirement management, test case management, defect management, and project management to assist companies in building best practices, managing distributed teams, tracking development lifecycles, measuring performances, etc.

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