

## **Manage Requirements for Outsourcing Application Development**

### **I. Introduction**

Many companies focus on a well-written Request for Proposal (RFP) as the initial point of negotiation for an outsourced project. While a RFP is perceived as an important element in a business process, it may not be appropriate for application developments. Because a RFP typically requires preparation of comprehensive requirement documents as well as the procedures and conditions for the sign-off, changes made to the requirements can potentially put the project at risk and increase costs in time, resources, and business opportunities. This document will discuss some practices that focus on defining and executing requirements in a collaborative environment with which companies can govern the development of an outsourced project as if it was developed in house.

### **II. Start with Requirement Definition**

There are few known best-practices that assist in defining requirements, such as adding use cases and test cases to a requirement before development work starts. Since all requirements have business rationales, technical rationales, or both, adding use cases allow designers to understand the requirements better and eliminate scope creep. Writing test cases also reduces verbal communication required and allow stakeholders to focus on the key elements of the requirements. It fits well with project teams that are typically working in a distributed environment. As a matter of fact, written communications should be encouraged through out the entire development lifecycle so that all discussions are tracked. All written communications should be logged in a centralized location that is directly associated with the requirements. This helps in retaining the knowledge and the evidences and eliminates issues with turnover of the personnel.

### **III. Modular Design**

Once you have a good understanding of the requirements, make sure to partition a “large” requirement into small requirements. Smaller requirements are easier to estimate accurately on the resources and the schedule.

### **IV. Participation of Outsourcer**

By the time you have all the necessary information about the requirements, you can assign a designer to draft the design document. You may ask the outsourcer to do this. This would be a high level design document created using test cases and notes associated with the requirements. This document can be similar to the Statement of Work (SOW) which most outsourcers are familiar with. An outsourcer should use written communications for all questions. When the outsourcer drafts the design document, he has the opportunity to understand the requirements as much as the designer in house. This process allows him to come up with a more accurate estimate on the effort and the schedule.

### **V. Design Review**

Do not expect the design document drafted by the outsourcer to be perfect. In fact, when you are establishing a working relationship with an outsourcer, the first draft of the design document is hardly usable. Take it as an opportunity for you to understand the communication

gap between the companies. You may be able to discover many cultural differences and communication issues with this simple process. (You may even learn the work ethics of the outsourcer. For example, a sloppy outsourcer may copy and paste information in test cases and notes and he calls it a design document.) When you identify the gap in the communications, you would be able to address them before the development and avoid potential disputes. It does not take long for people to write test cases, discussion notes, and design documents with the differences in mind.

## VI. Run by the Customers

A requirement may be intended for one or more customers, whether they are internal or external customers. Once the design document is approved, you may want your customer to review them as well.

## VII. Detail Design

You may realize that at this point, the details of the design may not be in place yet. Do not be discouraged. You have been building the foundation for an effective design and significantly reduce project risk. After you receive confirmation from the customer, you may ask the outsourcer to implement the detail design. If the design becomes convoluted, make sure to split them into smaller requirements. These derived requirements do not have to go through the same process.

### Screen Capture 1:

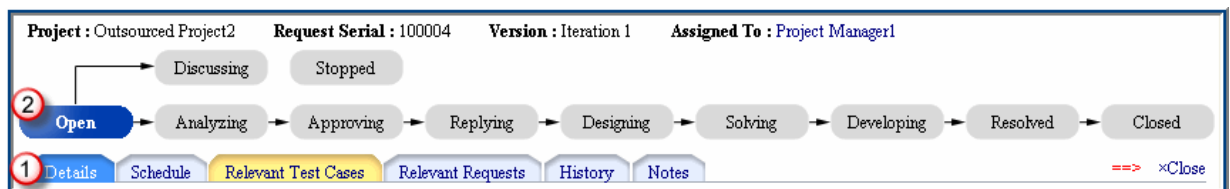
Below is the screen capture of RIQTek Manager's **Request Report**. Requirements are handled with request reports which contain multiple folders and a workflow.

#### 1. Folders:

- a. **Details:** Contain attributes of a requirement
- b. **Schedule:** Schedule and tasks assigned for the development of the requirement.
- c. **Relevant Test Cases:** Contain use cases and test cases associated with the requirement that assist in clarifying the requirement.
- d. **Relevant Request:** Contain changed or derived requirements.
- e. **History:** Track changes made to the attributes of the requirement as well as operations performed on the request report.
- f. **Notes:** Log all written discussions of the requirement.

#### 2. Workflow:

- a. **Open:** Capture the attributes of a requirement
- b. **Analyzing:** Analyzing test cases and discussions in the **Notes** folder to provide a high level design document.
- c. **Approving:**



## VIII. Developing Requirements

For requirements that are to be executed, you should create a task folder that allows you to track efforts and progresses. All tasks that are created through out the development lifecycle for the requirements should be tracked under this task folder. Thus, it provides you the means to evaluate the impact on changes.

### Screen Capture 2:

Below is the screen capture of RIQTek Manager's **Manage Plans** Web page in the **Standard Display Style**. The **Manage Plans** Web page contains three different display styles that help user to manage project plans. The **Standard Display Style** allows you to browse the used and assigned efforts. If a requirement is changed, you can evaluate the impact immediately.

1. **Task Folder for Module A** — Task folder for the requirement that goes through the design validating process. The **Used/Assigned Effort** column of the task folder ??shows the sum of all tasks folder and task items under it.
2. **Task Folder for Module A1** — Task folder for the requirement that derived from the Module A. It contains task that develops the requirements for Module A1, the requirement that is under the **Relevant Requests** folder. The **Used/Assigned Effort** column of the task folder ??shows the sum of all tasks items under it.
3. **Task Items** — Task items that are created through out the development lifecycle of Module A1.

Manage Plans										
*Demo Project*	All Versions	*Valid Tasks*	<Standard Display Style>	Refresh	Batch Add	Batch Edit	Add Task			
Task Name	Version	Task Phase	Task Type	Start Date	Finish Date	Progress	Used/Assigned Effort	Assigned To	Affirmant	
[PCS] RID100002: Develop B	V1.0	General Design	Task Folder	04-11-04	04-11-13	0%	0 / 12	< All Members >	PM Name	
Developing Request Id:100002	V1.0	Coding	Develop	04-11-04	04-11-07	0%	0 / 8	Developer Name	PM Name	
Testing Test Case Id: 100003	V1.0	Detail Design	Other	04-11-04	04-11-08	0%	0 / 4	Tester Name	PM Name	
[PCS] RID100003: Develop C	V1.0	General Design	Task Folder	04-11-04	04-11-13	0%	0 / 8	< All Members >	PM Name	
Developing Request Id:100003	V1.0	Coding	Develop	04-11-04	04-11-08	0%	0 / 8	Developer Name	PM Name	
[PCS] RID100000: Develop Module A	V1.0	General Design	Task Folder	04-11-04	04-11-13	0%	0 / 16	< All Members >	PM Name	
[PCS] RID100001: Develop A1	V1.0	General Design	Task Folder	04-11-04	04-11-13	0%	0 / 16	< All Members >	PM Name	
Test Case writing	V1.0	General Design	Other	04-11-04	04-11-06	0%	0 / 4	Tester Name	PM Name	
Developing Request Id:100001	V1.0	Coding	Develop	04-11-04	04-11-07	0%	0 / 8	Developer Name	PM Name	
Testing Test Case Id: 100001	V1.0	Detail Design	Other	04-11-04	04-11-08	0%	0 / 4	Tester Name	PM Name	

### Screen Capture 3:

Below is the screen capture of RIQTek Manager's **Manage Plans** Web page in **ToDo List Display Style**. This display style allows users to track the relationship between the tasks and the components of a development lifecycle, such as request reports, test cases, and defect report.

1. Total number of work items associated with the task folder or task item.
2. Number of work items being executed in the task.
3. Number of work items completed in the task.

Manage Plans										
*Demo Project*		All Versions	*Valid Tasks*	<ToDo List Style>		Refresh	Batch Add	Batch Edit	Add Task	
Task Name	Version	Task Type	Start Date	Finish Date	Progress	Assigned To	Affirmant	Total	Ongoing	Finished
[PCS] RID100002: Develop B	V1.0	Task Folder	04-11-04	04-11-13	0%	< All Members >	PM Name	2	2	0
Developing Request Id:100002	V1.0	Develop	04-11-04	04-11-07	0%	Developer Name	PM Name	1	1	0
Testing Test Case Id: 100003	V1.0	Other	04-11-04	04-11-08	0%	Tester Name	PM Name	1	1	0
[PCS] RID100003: Develop C	V1.0	Task Folder	04-11-04	04-11-13	0%	< All Members >	PM Name	1	1	0
Developing Request Id:100003	V1.0	Develop	04-11-04	04-11-08	0%	Developer Name	PM Name	1	2	3
[PCS] RID100000: Develop Module A	V1.0	Task Folder	04-11-04	04-11-13	0%	< All Members >	PM Name	2	2	0
[PCS] RID100001: Develop A1	V1.0	Task Folder	04-11-04	04-11-13	0%	< All Members >	PM Name	2	2	0
Test Case writing	V1.0	Other	04-11-04	04-11-06	0%	Tester Name	PM Name	0	0	0
Developing Request Id:100001	V1.0	Develop	04-11-04	04-11-07	0%	Developer Name	PM Name	1	1	0
Testing Test Case Id: 100001	V1.0	Other	04-11-04	04-11-08	0%	Tester Name	PM Name	1	1	0

## IX. Closing

When the development of a requirement is completed, it does not mean that it is finished. To close a development, you should make sure that all relevant test cases are closed. And to close a test case, you should make sure that all relevant defects are closed. Thus, it is important that you can trace test cases via a request report, and trace defects via a test case.

### Screen Capture 4:

Below is the screen capture of RIQTek Manager's **Manage Request** Web page.

To close a request report, make sure that all relevant test cases are closed. Click on the number under the **RT** column to browse the relevant test cases. The Relevant Test Cases folder of the request report contains a **RD** column with which you can trace the status of the defects.

Manage Requests											
Keyword:		All Status	All Versions	All Modules	<Added by>						
Total 6 Record(s). Page 1/1 Page(s)		First   Prev   Next   Last Goto 1		Page	go	HTML Out	CSV Out	Add			
Status	Serial	Summary	Version	Module	Priority	Significance	Qty	RT	RR	Assigned To	Added at
	100005	Design Change that can prevent defect	V1.0	A1	Normal	Normal	1	0	0	PM Name	04-11-04
	LinkToRequest	My requirement	V1.0	A1	Normal	Normal	1	0	0	PM Name	04-11-04
	100004	Develop Module A - Parent for RID 100001	V1.0	A	Normal	Normal	1	0	1	PM Name	04-11-04
	100003	Develop Module C - Does not contain Test Cases (RT...	V1.0	C	Normal	Normal	1	0	0	Developer Name	04-11-04
	100002	Develop Module B - Use/Test Cases help clarifying ...	V1.0	B	Normal	Normal	1	1	0	Developer Name	04-11-04
	100001	Develop Module A1	V1.0	A1	Immediate	Normal	1	2	0	Developer Name	04-11-04

Relevant Test case

## About RIQTek

RIQTek is a 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.