# Web-based Meeting Scheduler
Phase II: Interim
CS 6361 Section 001 Spring 2010

Process Specification
Version 1.04

April 15, 2010

Team Awesome

Team Website: http://www.utdallas.edu/~rhb081000/6361/

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Submitted to:
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# Revision History

| Version | Primary Author(s) | Description of Version | Date Completed |
|---|---|---|---|
| 1.00 | R. Bock | Initial document and template | March 27, 2010 |
| 1.01 | V. Isbell | Added "actions" subsections to 4.2-4.5 | April 2, 2010 |
| 1.02 | V. Isbell | Revised formatting of sections 4.2-4.6 | April 2, 2010 |
| 1.03 | R. Cavazos | Completed subsections 1.4, 2.1 - 2.3 | April 3, 2010 |
| 1.04 | R. Bock | Final formatting and editing. | April 14, 2010 |

# Table of Contents

# 1. Introduction

## 1.1 Purpose
The purpose of this document is to outline and describe the process that Team Awesome utilized during the development of the Web-based Meeting Scheduler.

## 1.2 Scope
This document describes the process of Team Awesome creating the WMS from the initial receipt of the requirements elicitation document to the final completion of deliverables. In this document we have outlined the team's vision, structure, and work assignment and acceptance process. We also provide a detailed schedule of the four subsections of this project (Phase I: Interim and Final and Phase II: Interim and Final), what items are received or created for each subsection, and who will be in charge of each deliverable.

## 1.3 Stakeholders
**Omnisoft, Inc. -** This is the company that has contracted the services of Team Awesome to develop a comprehensive requirements description and prototype of the Web-based Meeting Scheduler.

**Team Awesome -** The team responsible for creating a requirements description and prototype of the Web-based Meeting Scheduler.

**Professor Lawrence Chung -** The liason between Omnisoft and Team Awesome. Professor Chung provided the Initial Understanding and Specification and Validation requirements elicitation documents for the project.
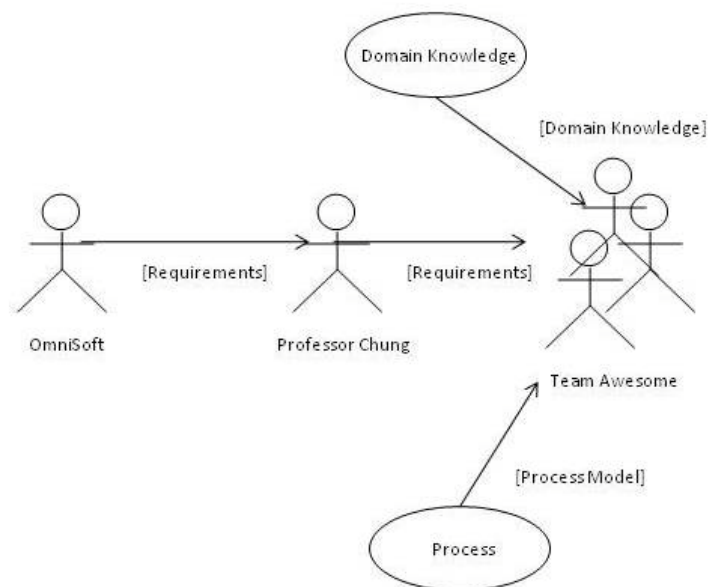
## 1.4 Definitions and Glossary
**Stakeholder -** People who have invested interest in the outcome of the project.
**Deliverable -** Any document, code, or other work-product that is produced during the project.
**Project Plan -** A document containing the outline for project execution and project control.
**Software Requirements Specification -** A full description of the actions and behavior of a system.
**Process Specification -** A document that details the process that a team follows which specifies what activities must be conducted to complete a project.
**Vision Document -** A document that outlines and describes the project plan or 'vision.'
**Report -** A document containing findings.
**Prototype** - A model of the software product to be developed which is not fully functional.
**User Manual -** A technical document created to aid the use of the system for end users.
**Iterative/Spiral Model -** The iterative model starts with planning and over the course of several iterations results in a finished system.
**Semi-formal Notation -** Notation that defines requirements/specifications and straddles the line between being formality and conceptualization.
**Domain Requirements -** Constraints (requirements) that are applicable to the domain of the system.
**Non-Functional Requirements -** Constraints (requirements) that can be used to judge the system.
**User Case Diagram -** A diagram containing activity flow for the actors in a system, including the system itself, users and outside elements.
**Class Diagram -** A diagram that shows the class structure, relationships and attributes.
**Sequence Diagram -** A diagram that shows the sequence of interaction between actors in a system, specifically showing the sequence of events.
**Soft-Goal Interdependency Graph -** A diagram that shows the main non-functional requirements of the system.
**Traceability -** The ability to trace connections that lead from the beginning of the system, through the requirements and into the final deliverable.
**NFR Model -** A model that shows the relationships between non-functional soft-goals and operational soft-goals.
**Activity Diagram -** A diagram that shows the overall flow of the system, indicating where choices are made and the stepwise actions taken at them.

## 1.5 References
- Project Phase I, http://www.utdallas.edu/~chung/RE/Project1.pdf
- Project Phase II, http://utdallas.edu/~chung/RE/Project2.pdf
- Team Awesome "Project Plan", Spring 2010

# 2. Organizational Structure

## 2.1 Vision and Goals
**Vision**
The vision for this team is to create an efficient, productive and well organized group of individuals all working toward the same goal of creating the best system possible. By working

toward these goals throughout the duration of the project, we are increasing and improving our requirements engineering skills, while developing real-world relationships and techniques that can be applied in the future.

**Goals**
- Efficiency
    - Equal Distribution of Workload
    - Meeting Deadlines
- Productivity
    - Steady Flow of Workload
- Organization
- High Quality Product (Deliverable)
- Development of Team Interaction

## 2.2 Team Roles

**Team Lead**

Rachel Bock and Victor Isbell are serving as the team leads during Phase I and Phase II of this project. The responsibilities of the team leads are to plan, schedule, and lead meetings, assign tasks to team members, settle disputes about documentation or among team members, and ensure all deliverables are submitted on time.

**Deliverable Lead**

For each deliverable there is exactly one deliverable lead. This person is in charge of the document's creation by organizing its development and completion through the assign developers. The deliverable lead is responsible for the document being completed on time and given to the team leads for final submission.
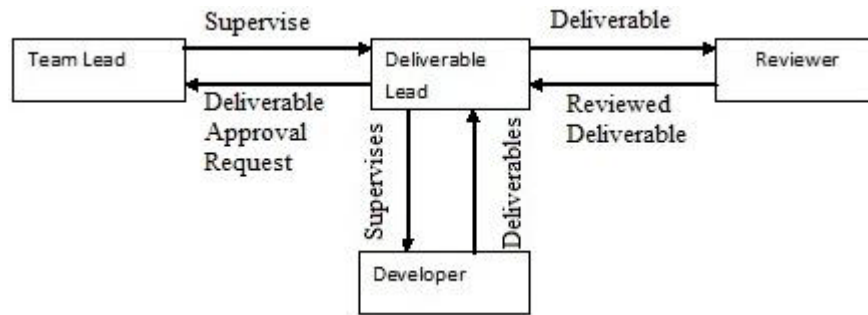
**Developer**

Every team member serves as either a developer or reviewer on each deliverable. Developers are responsible for the creation of the deliverable content in terms of research, writing documentation, or coding.

**Reviewer**

Every team member serves as either a developer or reviewer on each deliverable. Reviewers are responsible for reviewing deliverables and editing them to ensure the documents are correct in terms of spelling, grammar, and content.

**2.3 Workflow**

Workflow is completed in phases as organized by the team lead. The first phase is the creation phase by the developers, who are lead in their tasks by the deliverable lead. It is during this stage that work documents, deliverable documents and prototyping modules are created. After this phase, the reviewers for the section will review the documents or prototype to verify the work done, checking for errors, required changes or missing requirements before the next iteration or phase is completed.

**Workflow Diagram for Team Awesome**

# 3. Process Specification

## 3.1 Requirements Engineering Model

For this project Team Awesome has adopted an iterative software development process and an Agile-like philosophy of teamwork. The iterative development process mirrors the spiral model and is used to cycle through the elicitation, analysis, specification, and validation steps twice, once for each phase of the project. The Agile-like approach to teamwork is used during each step in the process in order to facilitate a shared workload across all team members by encouraging a collaborative, flexible, and productive environment.
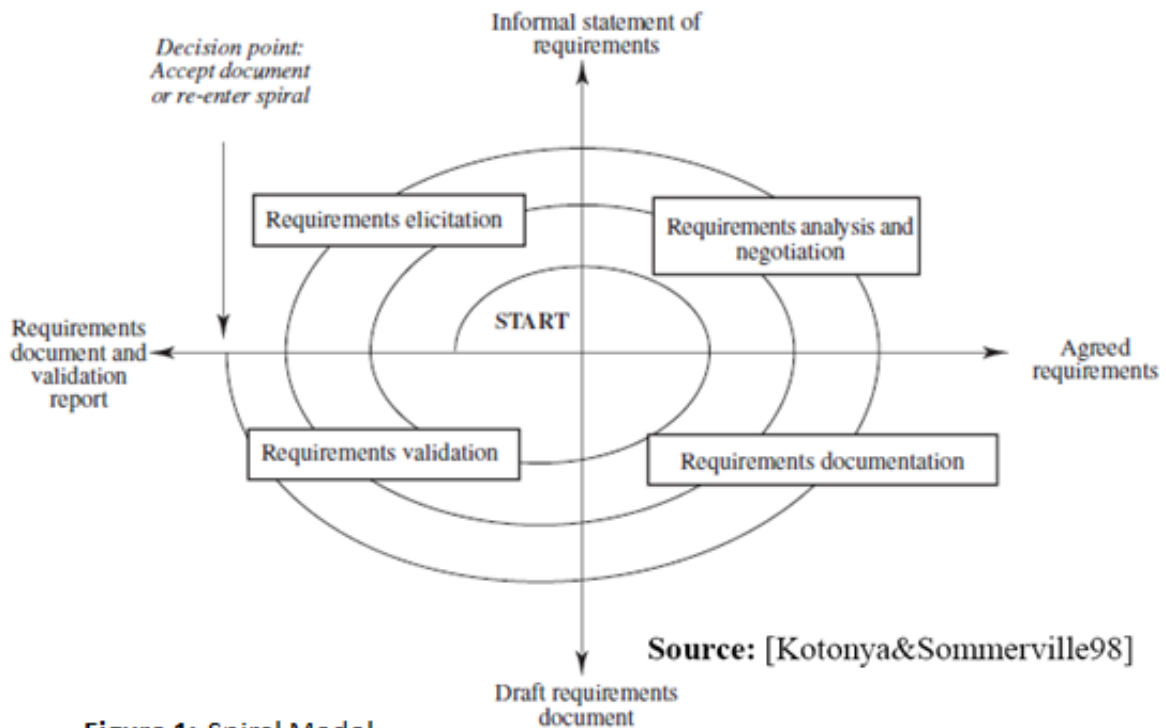


**Figure 1:** Spiral Model

### 3.2 Requirements Elicitation

At the beginning of phase one of the project, Professor Chung provided by a set of requirements. Additional requirements were also provided by Professor Chung at the start of the second phase.

To date, additional elicitation techniques used by the team include:
- Meeting, discussing, and brainstorming ideas as a team
- Feedback from in-class presentation (validation step)
- Reviewing content of in-class presentations by other teams
- Questioning Professor Chung regarding the assigned project

### 3.3 Requirements Analysis and Negotiation

Analysis was initiated with a detailed review of the initial problem description document provided by Professor Chung. This review covered a detailed analysis of the identified domain environment, functional requirements, and non-functional requirements. Both the domain environment and the requirements were analyzed multiple times for feasibility, completeness, no ambiguity, and consistency with one another. Additionally, input from class discussion and class presentations were factored into the analysis. As a result of the analysis, the team refined their understanding of the domain and the requirements while eliminating the identified issues.

### 3.4 Requirements Specification

The Software Requirements Specification created by team Awesome first identifies the issues encountered with the initial problem description document. Based on additional elicitation techniques, analysis, and validation, the team was able to refine their understanding of the issues. This is reflected in the Specification sections that outlines an improved understanding of the domain, the functional requirements and the non-functional requirements.

### 3.5 Requirements Validation

To validate the team's understanding of the problem and the requirements defined as an answer to this problem, a prototype was constructed and presented in-class. The prototype was accompanied by a discussion of the revised requirements and a trace matrix tying the requirements to the prototype. This prototype serves to elicit feedback from the stakeholders in order to ensure the team has correctly identified the problem and to elicit additional feedback from the stakeholders.

# 4. Project Organization

### 4.1 Project Phases

There are two main phases to the project, each divided into interim and final periods of delivery.

- Phase I: Interim ($29^{th}$ Jan 2010 – $2^{nd}$ March 2010)

  In this phase we will analyze the project requirements to create the Project Plan. With this Project Plan, we will then be able to develop the Software Requirement Specification that describes the software functionalities required by each stakeholder.We will then develop an initial prototype based on the requirements in the SRS and project presentation.

- Phase I: Final (3<sup>rd</sup> Mar 2010 – 25<sup>th</sup> March 2010)

In this phase we will revise and submit the Project Plan, SRS document, Prototype and Presentation created in Phase I: Interim. We also have to validate the functionality of the project with the SRS and establish a traceability matrix.

- Phase II: Interim (26<sup>th</sup> March 2010 – 15<sup>th</sup> April 2010)

In this phase we have to incorporate changes in our SRS and prototype based on the new requirements document provided by the stakeholders. We will use the documents from Phase I: Final to create a revised Project Plan and SRS and begin implementing these changes into the prototype and create a new presentation. We also have to create the Process Specification and Vision Document.

- Phase II: Final (16<sup>th</sup> April 2010 - 27<sup>th</sup> April 2010)

In this phase we have to prepare the final presentation and prepare final SRS, Prototype, User Manual, Process Specification and Vision Document. We will also establish the forward and backward traceability for all the prototype and requirements from the SRS document.
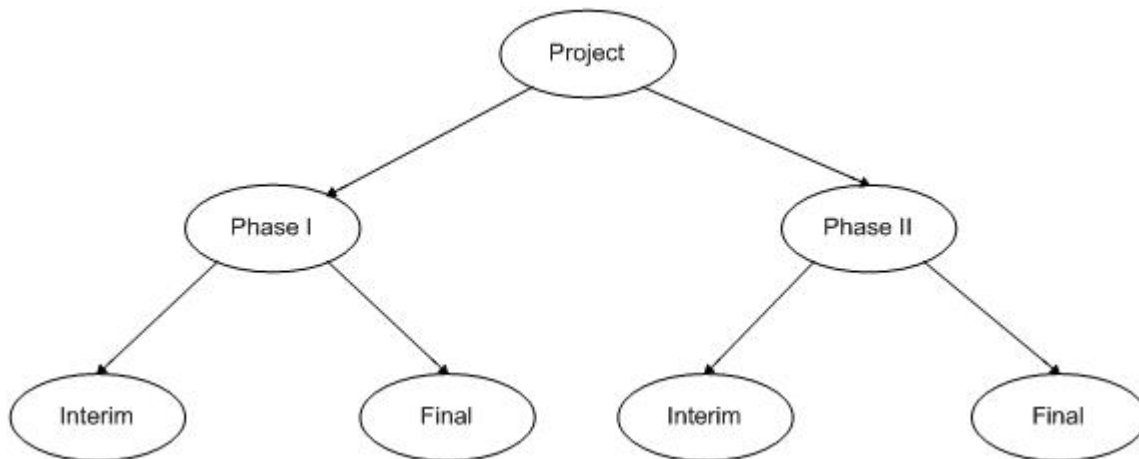

**Hierarchical Overview of the Project Phases**

## 4.2 Phase I: Interim - Description: (January 29, 2010 - March 2, 2010)
**Stakeholders**
The following are the stakeholders of Phase I: Interim of the project:
- Omnisoft, Inc.
- Team Awesome
- Professor Lawrence Chung

**Goals**
The following are major goals of Phase I: Interim of the project:
1. Construct project plan

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2. Determine stakeholder needs
3. Define software requirements
4. Build a prototype of the WMS software

**Inputs**
The following are the major inputs of Phase I: Interim of the project:
1. Requirements Elicitation - Initial Understanding
2. Preliminary Project Plan

**Process**
The following is a description of the process followed during Phase I: Interim of the project:
1. Prepare an agenda and conduct team meetings and discuss the work that needs to be done for the deliverable.
2. Division of work among all the team members and have deadlines for completion of assigned work.
3. Discuss issues and come up with ideas and propose a solution.
4. Prepare minutes of meeting and decide on the agenda for the next meeting.
5. Update the work done by each team member in Google Docs.
6. Review the deliverable and modify depending on the team and stakeholder feedback.
7. Submission of all the deliverables on time.

**Activities**
The following are the major activities performed during Phase I: Interim of the project:
1. In-person group meetings.
2. Email communications.
3. Create and revise shared documents.
4. Create and revise deliverables.
5. Create and revise presentation slides.
6. Prepare for presentation.

**Outputs**
The following are the major outputs of Phase I: Interim of the project:
1. Project Plan
2. Software Requirements Specification
3. Prototype
4. User Manual
5. Project Presentation

**Roles and Responsibilities**

| Phase I: Interim Deliverable | Leader | Developers | Reviewers |
|---|---|---|---|
| Updated Project Plan | A. Polcari | A. Polcari, R. Bock | C. Cheng, R. Cavazos, V. Isbell, R. Rivera, S. Kandimalla, N. Mishra |
| Software Requirements Specification | R. Bock | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, | R. Rivera, R. Cavazos |

| | | N. Mishra, C. Cheng | |
|---|---|---|---|
| Prototype | R. Rivera | R. Rivera, R. Cavazos | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, N. Mishra, C. Cheng |
| User Manual | V. Isbell | V. Isbell, R. Cavazos | R. Rivera, C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla |
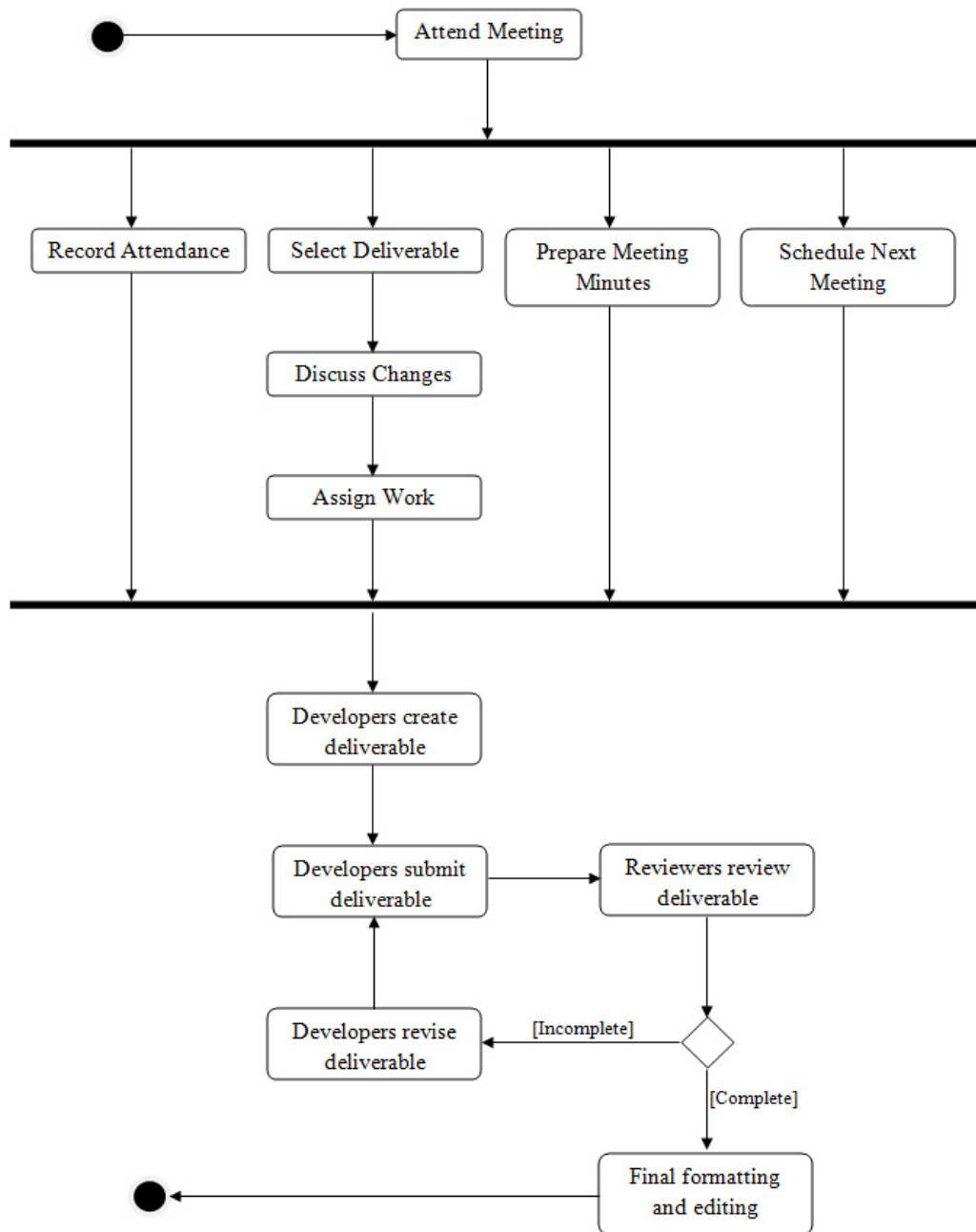
**Activity Diagram - Phase I: Interim Process**

## 4.3 Phase I: Final - Description: (March 3, 2010 - March 25, 2010)
**Stakeholders**
The following are the stakeholders of Phase I: Final of the project:
- Omnisoft, Inc.
- Team Awesome
- Professor Lawrence Chung

**Goals**
The following are major goals of Phase I: Final of the project:
1. Revise and update the software requirements specification, user manual and prototype
2. Establish the traceability between requirements and domain assumptions

**Inputs**
The following are the major inputs of Phase I: Final of the project:
1. Requirements Elicitation: Initial Understanding
2. Project Plan
3. Software Requirements Specification
4. Prototype
5. User Manual
6. Project Presentation

**Process**
The following is a description of the process followed during Phase I: Final of the project:
1. Prepare an agenda and conduct team meetings and discuss the work that needs to be done for this deliverable based on the feedback from previous phase.
2. Division of work among all the team members and have deadlines for completion of assigned work.
3. Discuss issues that were raised in previous phase and come up with ideas and propose a solution.
4. Prepare minutes of meeting and decide on the agenda for the next meeting.
5. Update the work done by each team member in Google Docs.
6. Review the deliverable and modify depending on the team feedback.
7. Submission of all the deliverables for this phase on time.

**Activities**
The following are the major activities performed during Phase I: Final of the project:
1. In-person group meetings.
2. Email communications.
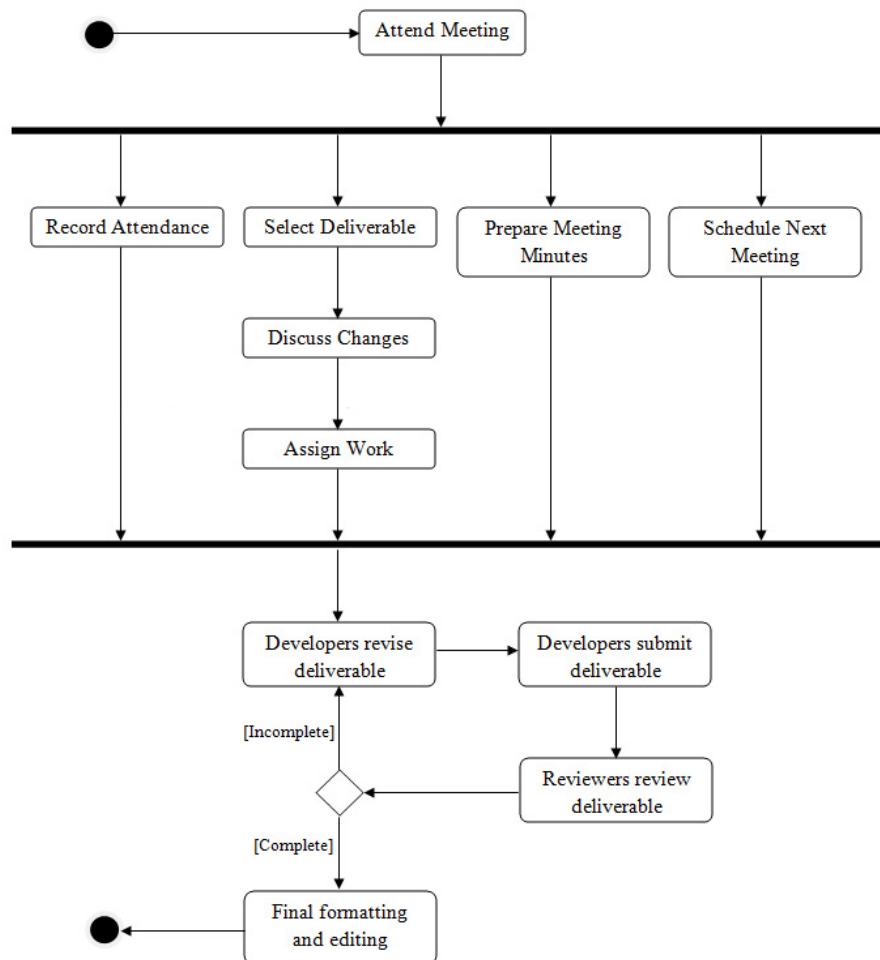3. Revise shared documents.
4. Revise deliverables.

**Outputs**
The following are the major outputs of Phase I: Final of the project:
1. Revised Project Plan
2. Revised Software Requirements Specification
3. Revised Prototype

4. Revised User Manual
5. Revised Project Presentation

**Roles and Responsibilities**

| Phase I: Final Deliverable | Leader | Developers | Reviewers |
|---|---|---|---|
| Updated Project Plan | A. Polcari | A. Polcari, R. Bock | C. Cheng, R. Cavazos, V. Isbell, R. Rivera, S. Kandimalla, N. Mishra |
| Software Requirements Specification | R. Bock | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, N. Mishra, C. Cheng | R. Rivera, R. Cavazos |
| Prototype | R. Rivera | R. Rivera, R. Cavazos | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, N. Mishra, C. Cheng |
| User Manual | V. Isbell | V. Isbell, R. Cavazos | R. Rivera, C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla |

**Activity Diagram - Phase I: Final Process**

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## 4.4 Phase II: Interim - Description: (March 26, 2010 - April 15, 2010)

**Stakeholders**

The following are the stakeholders of Phase II: Interim of the project:
- Omnisoft, Inc.
- Team Awesome
- Professor Lawrence Chung

**Goals**

The following are major goals of Phase II: Interim of the project:
1. Update and incorporate the changes in software requirements specification and prototype
2. Construct process specification
3. Construct vision document

**Inputs**

The following are the major inputs of Phase II: Interim of the project:
1. Requirements Elicitation: Initial Understanding
2. Project Plan from Phase 1
3. Software Requirements Specification from Phase 1
4. Prototype from Phase 1
5. User Manual from Phase 1
6. Project Presentation from Phase 1
7. Requirements Elicitation, Specification, and Validation

**Process**

The following is a description of the process followed during Phase II: Interim of the project:
1. Prepare an agenda and conduct team meetings and discuss the work that needs to be done for this deliverable based on the changes to the preliminary definition.
2. Division of work among all the team members and have deadlines for completion of assigned work.
3. Discuss issues and come up with ideas and propose a solution.
4. Prepare minutes of meeting and decide on the agenda for the next meeting.
5. Update the work done by each team member in Google Docs.
6. Review the deliverable and modify depending on the team feedback.
7. Submission of all the deliverables for this phase on time.

**Activities**

The following are the major activities performed during Phase II: Interim of the project:
1. In-person group meetings.
2. Email communications.
3. Create and revise shared documents.
4. Create and revise deliverables.

**Outputs**

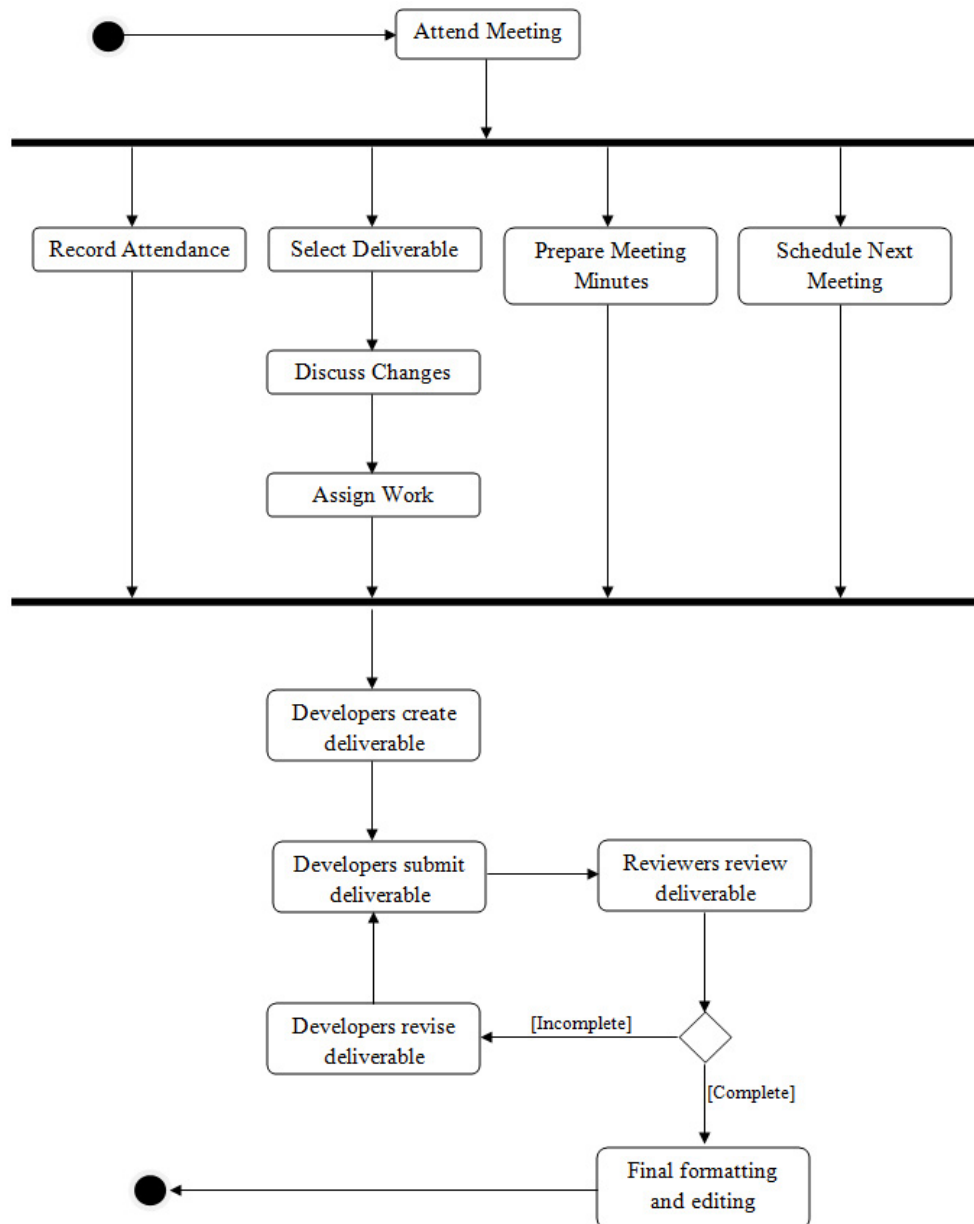The following are the major outputs of Phase II: Interim of the project:
1. Revised Project Plan
2. Revised Software Requirements Specification

3. Revised Prototype
4. Revised User Manual
5. Process Specification
6. Vision Document

**Roles and Responsibilities**

| Phase II: Interim Deliverable | Leader | Developers | Reviewers |
|---|---|---|---|
| Updated Project Plan | A. Polcari | A. Polcari, R. Bock | C. Cheng, R. Cavazos, V. Isbell, R. Rivera, S. Kandimalla, N. Mishra |
| Software Requirements Specification | V. Isbell | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, N. Mishra, C. Cheng | R. Rivera, R. Cavazos |
| Prototype | R. Rivera | R. Rivera, R. Cavazos | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, N. Mishra, C. Cheng |
| User Manual | V. Isbell | V. Isbell, R. Cavazos | R. Rivera, C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla |
| Process Specification | R. Bock | C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla, V. Isbell | R. Rivera, R. Cavazos |
| Vision Document | R. Bock | C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla, V. Isbell, R. Cavazos | R. Rivera |

**Activity Diagram - Phase II: Interim Process**

## 4.5 Phase II: Final - Description: (April 16, 2010 - April 27, 2010)
**Stakeholders**
The following are the stakeholders of Phase II: Final of the project:
- Omnisoft, Inc.
- Team Awesome
- Professor Lawrence Chung

**Goals**
The following are major goals of Phase II: Final of the project:

1. Revise SRS, Prototype, User Manual, Process Specification and Vision Document

**Inputs**
The following are the major inputs of Phase II: Final of the project:
1. Requirements Elicitation: Initial Understanding
2. Project Plan
3. Software Requirements Specification
4. Prototype
5. User Manual
6. Project Presentation
7. Requirements Elicitation, Specification, and Validation
8. Process Specification
9. Vision Document

**Process**
The following is a description of the process followed during Phase II: Final of the project:
1. Prepare an agenda and conduct team meetings and discuss the work that needs to be done for this deliverable based on feedback from previous phase.
2. Division of work among all the team members and have deadlines for completion of assigned work.
3. Discuss issues raised in previous phase and come up with ideas and propose a solution.
4. Prepare minutes of meeting and decide on the agenda for the next meeting.
5. Update the work done by each team member in Google Docs.
6. Review the deliverable and modify depending on the team feedback.
7. Submission of all the deliverables for this phase on time.

**Activities**
The following are the major activities performed during Phase II: Final of the project:
1. In-person group meetings.
2. Email communications.
3. Revise shared documents.
4. Revise deliverables.
5. Create and revise presentation slides.
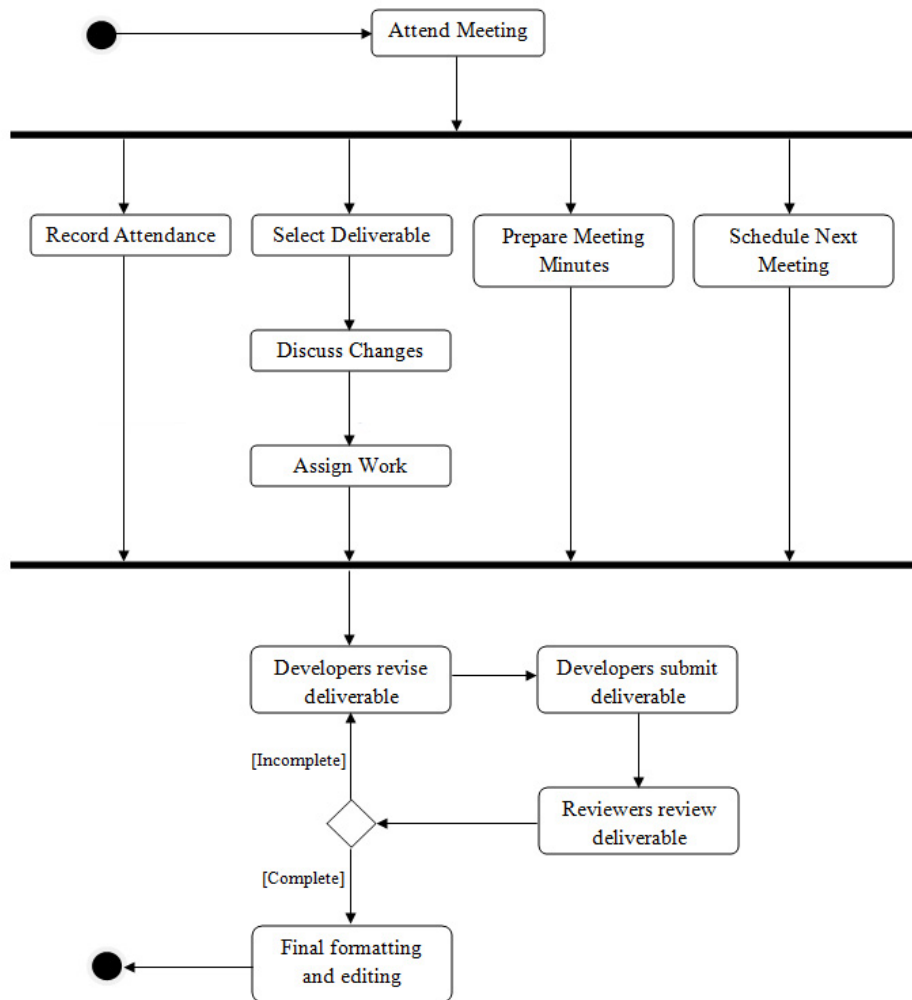6. Prepare for presentation.

**Outputs**
The following are the major outputs of Phase II: Final of the project:
1. Final Project Plan
2. Final Software Requirements Specification
3. Final Prototype
4. Final User Manual
5. Final Process Specification
6. Final Vision Document
7. Final Project Presentation

**Roles and Responsibilities**

| Phase II: Final Deliverable | Leader | Developers | Reviewers |
|---|---|---|---|
| Updated Project Plan | A. Polcari | A. Polcari, R. Bock | C. Cheng, R. Cavazos, V. Isbell, R. Rivera, S. Kandimalla, N. Mishra |
| Software Requirements Specification | V. Isbell | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, N. Mishra, C. Cheng | R. Rivera, R. Cavazos |
| Prototype | R. Rivera | R. Rivera, R. Cavazos | R. Bock, A. Polcari, V. Isbell, S. Kandimalla, N. Mishra, C. Cheng |
| User Manual | V. Isbell | V. Isbell, R. Cavazos | R. Rivera, C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla |
| Process Specification | R. Bock | C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla, V. Isbell | R. Rivera, R. Cavazos |
| Vision Document | R. Bock | C. Cheng, R. Bock, N. Mishra, A. Polcari, S. Kandimalla, V. Isbell, R. Cavazos | R. Rivera |

**Activity Diagram - Phase II: Final Process**

## 4.6 Traceability

**Phase I: Interim vs. Phase I: Final**

| Phase 1: Interim Deliverable | Phase 1: Final Deliverable |
|---|---|
| Preliminary Project Plan | Revised Project Plan |
| Software Requirements Specification | Revised Software Requirements Specification |
| Prototype | Revised Prototype |
| User Manual | Revised User Manual |
| Phase I: Interim Presentation | Revised Phase I Presentation |

**Phase I: Final vs. Phase II: Interim**

| Phase I: Final Deliverable | Phase II: Interim Deliverable |
| --- | --- |
| Revised Project Plan | Revised Project Plan |
| Revised Software Requirements Specification | Revised Software Requirements Specification |
| Revised Prototype | Revised Prototype |
| Revised User Manual | Revised User Manual |
| Revised Phase I Presentation | Revised Phase I Presentation *(no change)* |

**Phase II: Interim vs. Phase II: Final**

| Phase II: Interim Deliverable | Phase II: Final Deliverable |
| --- | --- |
| Revised Project Plan | Final Project Plan |
| Revised Software Requirements Specification | Final Software Requirements Specification |
| Revised Prototype | Final Prototype |
| Revised User Manual | Final User Manual |
| Revised Phase I Presentation | Final Presentation |