WEB BASED MEETING SCHEDULER SYSTEM

Project Plan

Version 4.0

CS 6361 – ADVANCED REQUIREMENTS ENGINEERING, SPRING 2010
UNIVERSITY OF TEXAS AT DALLAS

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"The hardest single part of building a software system is deciding precisely what to build. No other part of the conceptual work is as difficult as establishing the detail technical requirements, including the entire interface to people, to machines, and to other software systems. No part of
the work so cripples the resulting system if done wrong. No other part is more difficult to rectify later."
[Brooks, 1987]

Revision History

Author	Date	Description	Version
Team	01/25/2010	Initial version of the project plan document	1.0
Neha	02/24/2010	Updated Stakeholder, Team Meetings details	2.0
Priya	04/10/2010	Updated Work Elements, Estimation ,Resource Management	3.0
Priya	04/23/2010	Updated the Final version	4.0

Table of Contents

1   Introduction

This document provides background information for the rest of the document. It briefly describes the project, the client deliverables, the project milestones, and expected document changes.

This project has two phases. The first phase is requirement elicitation which includes the delivery of a detail requirement description and a non-functional prototype of the GUI. Second phase, includes the product specification and process specification and functional system.

1.1 Project Overview

The web based meeting scheduler (WMS) is a user friendly tool developed to assists humans in office environments to schedule meetings efficiently. The algorithm used in the distributed meeting scheduler paves way for negotiation of various processes on behalf of their users and comes up with an agreement on a common meeting time that is acceptable to all the users and abides by all the constraints set by the hosts and attendees. The motive of the algorithm is to obtain a solution based on the knowledge it acquires during the process. In summary the Web-based Meeting Scheduler follows a decision oriented methodology that depends on knowledge based approach. The purpose of WMS is to support the organization of meetings and to determine for each meeting request, a meeting date and location so that most of the intended participants shall effectively participate.

The principal users of this system are the Meeting Initiator and Meeting Attendees/Participants. It is the responsibility of the meeting initiator to schedule the meeting based on the availability of the attendees along with the constraints expressed by the attendees/participants. The meeting scheduler system shall have the ability to handler several meeting requests in parallel and resolve conflicts.

The key functionalities of this system are:

- Schedule/ plan meetings

- Monitor meetings, especially held in a distributed environment

- Re-planning of meetings to support changing user constraints

- Support conflict resolution

- Keep participants informed of the meeting schedules and any changes

- Cancel Meeting

1.2 Stakeholders

There are primarily three stakeholders involved in Meeting Scheduler System:

1   Web based company Omni-soft: The Company for which the Meeting Scheduling System needs to be developed.

2   Team Call of Duty: The team responsible for developing the Meeting Scheduling System for web based company

3   Professor Lawrence Chung: Primarily the facilitator between company and Team Call of   Duty. He was responsible for the Phase I requirements elicitation and now acting as a communication point between company and team Call of Duty.

1.3 Project Scope

The scope of the system shall include

- Scheduling the meeting in efficient way.
- Gathering the feedback from attendee.
- Cancelling the meeting.
- Changing the meeting schedule and/or location.
- Scheduling concurrent meetings in timely manner.
- Conducting virtual meetings.
- Confirming the location and time of the meeting.
- Minimize users effort in co-ordinating and scheduling meetings

1.4 Project Usability

- Automate the meeting schedule process to enable efficient use of the time and efforts of meeting organizer.
- Select a date and time according to the availability of the participants.
- Allocate the location that is convenient to all the participants.
- Send reminders to the participants about the meeting and any schedule changes.
- Reorganize and modify the meeting schedule if required.
- Arrange virtual meetings (audio and video conferencing) in case there are remote attendees.

1.5 Project Deliverables

The project is divided into two phases with each phase having two sub-phases. The below table provides on the deliverables in each phase and their corresponding deadlines:

	DELIVERABLE	COMPLETION DATE
Phase 1	Preliminary Project Plan 1.0	2010.01.28
	Interim Report 1.1	2010.03.02
	Final Presentation and Report 1.2	2010.03.25
Phase 2	Interim Report 2.1	2010.04.15
	Final Presentation and Report 2.2	2010.04.27

1.6 Evolution of this Document

This document will be updated as the project progresses. A new revision will be released after each modification. Every modification has to be logged in the Revision History.

Updates should be expected in the following sections:

a. **References** – will be updated as necessary.

b. **Definitions, acronyms, and abbreviations** – will be updated as necessary.

c. **Organizational Structure** – will be updated as the roles and responsibilities are assigned for each phase.

d. **Management objectives and priorities** – will be updated to as priorities change.

e. **Assumptions, dependencies and constraints** – will be updated as necessary.

f. **Risk management** – will be updated as new risks are identified.

g. **Technical Process** – will be updated as requirements become clearer.

h. **Work elements, schedule and budget** – will be updated in the case of schedule or budget changes.

1.7 References

[1] Requirement Engineering – Advanced Requirement Engineering. CS/SE 6361 Section 001, Spring 2010. http://www.utdallas.edu/~chung/RE/syllabus.htm

[2] Project Description: Requirements Elicitation: Initial Understanding
http://www.utdallas.edu/~chung/RE/Project1.pdf

[3]
http://www.utdallas.edu/~chung/CS6354/CS6354_U07_source/Team_2/SoftwareProjectManagement_Plan_v1.1_Team2.doc

[4] http://re-project.org/Documents/Final_Project_Plan.doc

[5] http://www.utdallas.edu/~chung/RE/Presentations09F/Pioneer-Team/RE%20Deliverable/

[6] Roles and responsibilities www.csuchico.edu/cms/Readiness/roles.doc

[7] www.search.org/files/doc/sample%20project%20plan.doc - section 3.2, 3.4

[8] IEEE standards for SRS [IEEE-STD-830-1993]

[4] http://pro-10.design.officelive.com/aboutus.aspx

[5] Microsoft Office Outlook http://office.microsoft.com/en-us/outlook/HA011276781033.aspx

1.8 Definitions, Acronyms and Abbreviations

Following are the important terms and their definitions related to schedule meeting:

A

Active Participants – One or more participants who give presentations in the meeting. They are the one who called for to attend meeting.

Activity Diagram – A semiformal diagram (UML) that depicts the process or activity.

C

Class Diagram – A diagram that depicts classes in a s/w system and their associations.

D

Date Conflict – When date and time of the two meetings conflict.

Date Range –Give the range of dates when meetings take place.

Deliverable – Output of an activity or the work product are the deliverables of the project.

Domain Requirements – Requirements of the domain.

Duration -The time duration of meeting.

E

Exclusion Set – Dates or times ranges when participants cannot attend meeting.

I

Important Participant- A person that the meeting directly influences

L

Location – Physical location of the meeting room.

M

Meeting organizer - One who is responsible for managing meetings. Example –ensure meeting should start and end at scheduled time, review agenda, prepare minutes of meeting.

Meeting Initiator - One who make necessary arrangements for the meeting. Example - decide location.

Meeting Proposal- An invitation to the meeting including meeting topic, date range and duration that is sent to a list of potential participants.

N

NFR Model – A goal oriented analysis model that establishes relationship between non-functional requirements soft-goals and operational soft-goals.

Non-Functional Requirements – Requirements that cannot be formulated, but that can be fulfilled by different features and functions

P

Preference Set – Give the dates preference for meeting.

Process Specification – Development of software needs many processes to be carried out by the team to do an activity which is the process

R

Regular Participants – Participants who attend meeting, listen and ask questions from the active participant.

Required equipment - Equipments such as microphone, projector, blackboard, and stationary needed to conduct the meeting.

Report –This will contain the detailed description of the product models.

Prototype – A working model of the software system that is to be developed.

Requirements Engineering Incremental Model – cycles are divided into smaller, more easily managed iterations..

Requirements Creeping Rate – It is the percentage of change divided by time

S

Sequence Diagram – Object interactions can be described in this diagram.

Soft-Goal Interdependency Graph (SIG) – A hierarchical structure that shows the dependencies between various soft goals

Semi-formal Notation – The notation that is neither too formal nor too informal (something in between the both) to understand properly

Stakeholder – The project's outcome, interests some people and those people are called stakeholders.

Software Project Management Plan – A software development process consists of many activities and a document that captures all these activities in detail is called a software project management plan.

Software Requirements Specification – The outcome of the Requirement analysis stage in the software lifecycle is captured in a document called SRS that contains the features of the requirements that the software has.

T

Traceability – Mapping of the requirements with the work product.

U

Use Case Diagram – UML description of user and system interactions.

User Manual – A document that has the prototype which is given in the form of screenshots and description of how to use it and what it contains.

V

Virtual meeting – When participants are located at different location, then meeting is held by teleconference, videoconference etc.

Vision Document – The starting point of any project is the Vision document which has 3 wares, the hardware, software and people-ware who interact with the s/w system.

1.8.1 Abbreviations

SRS – Software Requirement Specifications

WMS – Web based meeting Scheduler

FR – Functional Requirement

NFR – Non functional requirement

DR- Domain requirement

2 Project Organization

2.1 Process Model

The process used for this project will be an agile methodology, based on empirical rather than defined methods. Agile methods involve planning what one wants and then adapting these plans to the results. It is an Iterative approach where requirements and solutions evolve through collaboration between self-organizing cross-functional teams.

We will use UML tools to create the system model and the subsequent breakdown of the design.

2.2 Organizational Structure

Project Management Team

The Project Management Team is comprised of the Project Leads, Project Manager and chaired by the Project Manager. The charge of the committee is to share information among teams and address implementation issues that impact multiple applications.

- Meet on a scheduled basis to discuss and resolve implementation issues

Project Manager

The Project Support Manager assists with project planning, budget analysis, coordination of communication activities and training programs. Involved in other support activities as the situation dictates. Serves as member of the Project Management Team.

- Assist implementation staff with project planning tools
- Analyze budget needs and monitor expenditures
- Coordinate project site set up
- Act as liaison between project team and client

Team Lead

The Team Lead is responsible for managing the team activities and schedule. Serves as a member of the Project Management Team. Works closely with project sponsor to gather user requirements.

- Project planning
- System development and testing
- Documentation development
- Status reporting
- Technical coordination with local technical staff and

Subject Matter Expert

Responsible for understanding the application domain and compile enterprise requirements

- Determine the scope of the problem, identify stakeholders, and analyze the existing system to compile Enterprise Requirements

Module Team Lead

The Module Team Lead ensures that the work of the team proceeds as planned. Works closely with the Team lead.

- Monitors team tasks and progress
- Maintain activity log
- Provide status report to Team lead
- Develop and maintain task plans
- Convene team meetings
- Assist with Issue technical resolution
- Responsible for mentoring of new members of the team
- Review of deliverables from Team Members

Module Team Members
The Module Team Members work under the direction of the Module Team Lead.

- Assist in resolution of administrative and/or academic issues
- Define business practices
- Participate in data mapping/conversion activities and system testing
- Attend team module meetings

Role	Team Member
Client	Kerem Kulak
Project Manager	Neha
Team Lead	Priya Priya
Subject Matter Expert	Anuj
Module lead	Sujatha
Team Members	Hari, Satwant, Kawal
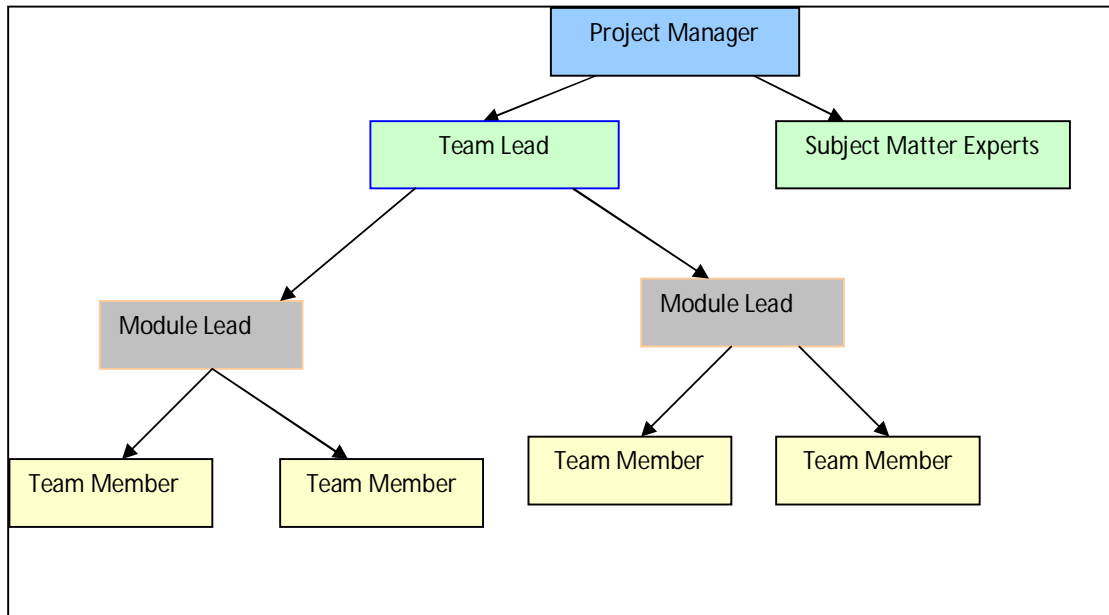
2.3 Organizational Boundaries and Interfaces

Team leaders in each phase will be responsible for coordinating team meetings, updates, communications, and team deliverables. Team leader will also be responsible in working closely with the stakeholders of the project to understand the system domain and functionality.

2.4 Project Responsibilities

The entire project team is responsible for the successful delivery of the product.

Team member assignments per deliverable according to expertise

Project Phases	Responsibility	Team Lead
Project Plan	Entire Team	Neha
Interim report 1.1	Entire Team	Neha
Final report 1.2	Entire Team	Anuj
Interim report 2.1	Entire Team	Priya
Final Report 2.2	Entire Team	Satwant

2.5 Team Meetings

Below table provides the participation of the team members for the team meeting:

Meeting No.	Date	Anuj	Hari	Kawal	Kerem	Neha	Priya	Satwant	Sujatha
1	24-Jan-10	x	X	X	X	X	X	X	X
2	20-Feb-10	x	x	x	X	x	x	x	x
3	26-Feb-10	x	x	x	x	x	x	x	x
4	2-Mar-10	x	x	x	x	x	x	x	x
5	18-Mar-10	x	x	x	x	x	x	x	x
6	02-Apr-10	x	x	x	x	x	x	x	x
7	6-Apr-10	x	x	x	x	x	x	x	x
8	10-Apr-10	x	x	x	x	x	x	x	x
9	24-Apr-10	x	x	x	x	x	x	x	x
Total		8	8	8	8	8	8	8	8

2.6 Product Overview

The WMS is a web-based meeting scheduler system to efficiently schedule meetings and determine the available resources necessary for the meeting to be initiated. The purpose of this system is to support the organization in scheduling meetings by determining each meeting's request, date and location. The WMS system will monitor meetings, plan meetings under constraints expressed by the participants, reschedule meetings based on constraints, support conflict resolutions, and manages all the interactions among participants. It also has the ability to concurrently handle several meeting requests at a time.

Being an online system, it can be easily accessed from any computer with internet access, thus removing any constraints of time or place. The system also sends relevant notifications and information to respective users through emails. The system will have a user-friendly interface.

3   Managerial Process

3.1   Management Objectives and Priorities

The objective of the project is to develop a meeting Scheduler system within allocated time, budget and specified quality. The project is prioritized due to high benefits to the organization. One of the important usages of this project is that it will automate the process of meeting scheduling and thus save the time and efforts of meeting organizer. More benefits will be further discussed ahead.

The primary focus of our team is the reliability, usability, and quality. Satisfying requirements and perfecting the product is very important to us. Meeting user's needs is our top goal.

3.2 Assumptions and Dependencies

The following will be the major assumptions in this project:

1. Management will ensure that project team members are available as needed to complete project tasks and objectives
2. All project participants will abide by the guidelines identified within this plan
3. Project Plan might change based on new information revealed or issues encountered.
4. Availability of customer for meetings and trainings

3.2.1   Constraints

The project has the below 3 constraints:

- Time : Time frame within which the activity should be completed

- Cost : Cost of developing the system within the estimated budged

- Quality: Level of quality to be met as per the requirements of the users

3.3   Risk Management

The initial Risk Assessment attempts to recognize, characterize, prioritize and document a mitigation approach relative to those risks which can be identified prior to the start of the project. This section outlines the risks identified at the start of the project

1. Continuous stream of requirements changes
2. Business owners may not be available during validation phase; this may affect the schedule.
3. Timeline Estimates Unrealistic or Schedule Slips
4. Level of experience in team
5. Absence of Commitment Level
6. Project Team Availability
7. Physical Location of Team prevents effective management
8. Disk failure – all project deliverables and documents will be stored in the groups

3.4   Monitoring and Controlling Mechanisms

The following are the monitoring and controlling mechanisms for the risks identified in the project.

1. Continuous review of project momentum by all levels
2. Regularly track and report project progress
3. Redistribute tasks in case of delay in completion prioritizing as per requirement
4. Pre-plan tasks in case the task's complexity had been under estimated before
5. Have clearly identified and usable deliverable
6. Communication of any changes to the requirement being document and communicated to the team.
7. Use of Intranet project website, comprehensive Communications Plan

4   Technical Process

4.1   Methods, Tools and Techniques

4.1.1   Method

The Method we will be following will have a flavour of agile Methodology, an incremental and iterative approach.

4.1.2   Tools

The tools and applications used by the team for this project:

a) Document Development: **Microsoft Office Word**

b) Architectural and Design Diagrams: **IBM Rational Rose , StarUML, ConceptDraw**

c) Communication : **Google Groups**

d) Development: **Glassfish Version 3 Server, java 1.6, J2ee, Servlets , Sql Server 2005, Ajax, JavaScript**

4.1.3   Techniques

The Techniques we will be using in our project will be focused on Model driven development, Test driven development, and object oriented development.

MDD gives architects the ability to define and communicate a solution while creating artifacts that become part of the overall solution. MDD is also comprised of the ability to visualize the domain, such as a business domain, and the generation of implementation artefacts. The Model-Driven Architecture (MDA) defines an approach to modelling that separates the specification of system functionality from the specification of its implementation on a specific technology platform. In short it defines a guideline for structuring specifications expressed as models.

Test Driven Design (TDD). With a TDD approach you create a test then write enough production code to fulfil that test. In other words, the tests form your detailed design model (as executable specifications), arguably making TDD a modelling approach.

Object Oriented Development (OOD) promises to reduce development time, reduce the time and resources required to maintain existing applications, increase code reuse, and provide a competitive advantage to organizations that use it.

4.2 Software Documentation

- Software Project Management Plan (SPMP)
- System Requirements Specification (SRS)
- Process and Product Specification
- Vision Document
- Meeting Scheduled
- Supplementary Document
- User Manual

4.3 Project Support Functions

- Configuration Management :Change requests can be tracked and approved within team's Google Groups website
- Quality Assurance
- Verification and Validation
- Training

5   Work elements, schedule and budget

This SOW shall commence on Jan 31st, 2010 (the "Effective Date") and shall continue until 29th April, 2011. The final demonstration is to be given on April 27 2010. Below are the timelines and Deliverable details.
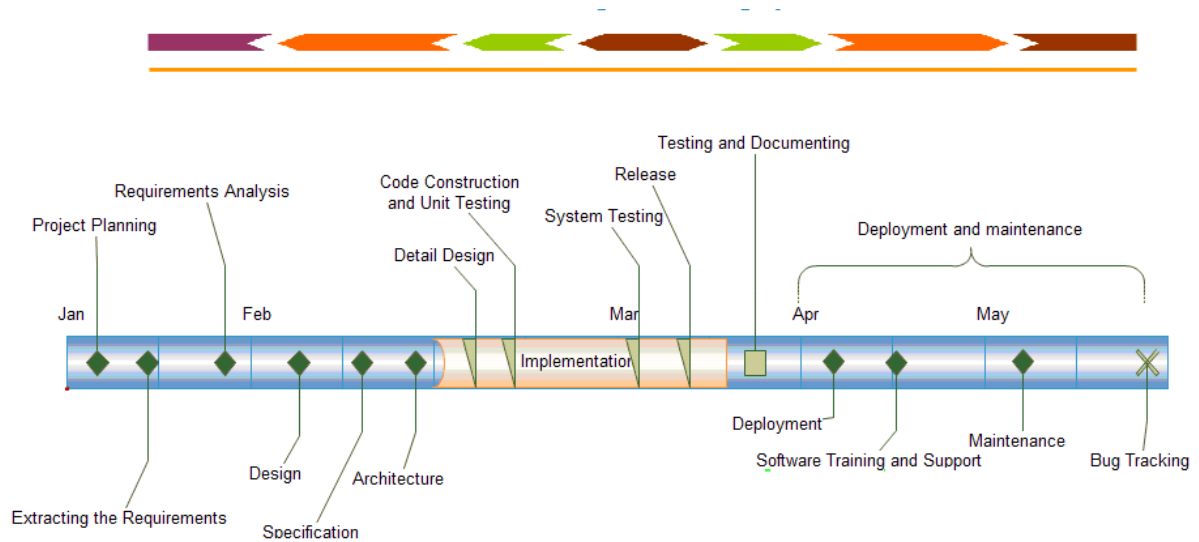- Interim Project I (Phase 1.1) has been given on Feb 03, 2010
- Final Project I (Phase 1.2) has been given on Feb 25, 2010
- Interim Project II (Phase 2.1) has been given on April 15, 2010
- Final Project II (Phase 2.2) will be given on April 27, 2010

5.1 Budget

The project is budgeted for 8 resources.

5.2 Project TimeLine

5.3 Resource Management

		Anuj	Hari	Kawal	Kerem	Neha	Priya	Satwant	Sujatha
Phase I									
	Project Plan	x	x	x	x	x	x	x	x
	System Requirement Specification		x	x	x	x	x		x
	Prototype	x						x	
	User Manual								x
	Presentation	x	x	x	x	x	x	x	x
	Document Formatting					x	X		
Phase II									
	Project Plan						x		
	Vision Document	x				x			
	Supplementary Document					x	x		
	System Requirement Specification Refinement		x			x	X		
	Process and Product Specification	x		x	x	x	x		x
	User Manual								x
	Implementation							x	
	Document Formatting					x	x		