

CSC 190

Spring 2013

Team Sierra

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Project Management Plan

Saturday March 30th, 2013

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1. INTRODUCTION

This is the software system proposal document for the “Salon Scheduling System” project sponsored by Dragonfly Salon and Boutique. This project is being undertaken by the “Team Sierra” development team. The team is comprised of undergraduate students majoring in Computer Science at California State University, Sacramento. The team members are enrolled in a two-semester senior project course required of all undergraduate majors. Successful delivery of the desired software product will fulfill the senior project requirement for the student team members.

PROJECT SPONSOR

Contact Person's Name: Alayna and Lisa Sigurdson

Title: Owners and Hair Stylists

Organization Name: Dragonfly Salon and Boutique

Contact information: Alayna.Sigurdson@gmail.com

DEVELOPMENT TEAM:

“Team Sierra”:

- Alex Chernyak
- Joubin Jabbari
- Kyle Matz
- Mike McParland
- Scott Livingston
- Serge Lysak

Team Contact Info: TeamSierra@googlegroups.com

1.1 Purpose

The purpose of this document is to establish a mutual understanding between the team and the sponsor regarding the project execution and project control.

1.2 Scope

This document will introduce a reader to an overview of the project, project organization, project management and control, technical process, activities and schedule. The scope of this document will not cover a complete set of agreed upon requirements.

1.3 Definitions, Acronyms and Abbreviations

This section will include the various definitions, acronyms, and abbreviations that we will use throughout this document. This section can be referenced throughout reading the document to further explain unclear words.

1.3.1 Definitions

Source Code

A collection of computer instructions written in human-readable computer language.

Javadoc	Javadoc is a documentation standard that generates HTML files with descriptions of the code to be view using any web browser.
Faculty Advisor	The senior project teams have a CSc faculty member assigned to them to advise the team on various aspects throughout the course of the project.
Source Code	A collection of computer instructions written in human-readable computer language.
Executable Code	The form of the software that can be ran on the computer.
Project Abstract	Provides information regarding our sponsor and their operation as well as the initial concept of the software system.
Project Charter	Provides a detailed approach to the project.
Project Documentation	Includes all of the following documents that will be created for the software system over the course of the project.
Project Management Plan	Provides detailed information on how the project will be managed and resources will be obtained.
Software Requirements Specifications	Describe the behavior, scope and dependencies of the system to be developed. Provide explanation on how it will be used.
Software Design Specification	Provides a high level view of the design and interfaces that the project is based on.
System Test Specification	Sequence of tests to be conducted to test the system.
System Test Report	Results from the System Test Specification.
User Manual	A complete guide on how to install and operate the system.

1.3.2 Acronyms

CD	Compact Disk
CSc	Computer Science
IDE	Integrated Development Environment

SPMP	Software Project Management Plan
SRS	Software Requirement Specifications

1.3.3 Abbreviations

App	Application
Mgt	Management
Mtg	Meeting
Req't	Requirement
Spec	Specification

1.4 References

No references were used.

1.5 Overview of Contents of Document

This section includes the overview of each main topic of this document. The overview explains what each section includes and any other details about the sections.

1.5.1 Project Overview

The section includes an explanation of the phases of work that will be scheduled, monitored and managed throughout the project's development life cycle. Also included is a description of the team's planned organizational structure for both CSc 190 and CSc 191. Individual team member assignments and responsibilities will be also described.

1.5.2 Project Organization

The section includes an explanation of the phases of work that will be scheduled, monitored and managed throughout the project's development life cycle. Also included is a description of the team's planned organizational structure for both CSc 190 and CSc 191. Individual team member assignments and responsibilities will be also described.

1.5.3 Project Management and Control

This section of the document will include how the overall project plan will be kept up to date, the objectives and priorities of the project team, how the team members will manage the project, issue and risk management.

1.5.4 Technical Process

This section includes a description of the methods the team will use in representing the technical details that will need to be recorded and published during project development. In addition, the team's documentation plan is described along with a list of all documents to be produced over

the development life cycle. In addition, this section should describe how documents will be collaboratively modified and the version control process that will be used. In addition, this section should describe coding standards that will be used and the manner in which technical work will be reviewed and approved.

1.5.5 Activities and Schedule

This section contains a description of activities and tasks to be performed in each of the development phases, the resources required to accomplish the work, an estimated (and hypothetical) budget, and the baseline schedule for the project.

2. PROJECT OVERVIEW

The section includes an explanation of the phases of work that will be scheduled, monitored and managed throughout the project's development life cycle. Also included is a description of the team's planned organizational structure for both CSc 190 and CSc 191. Individual team member assignments and responsibilities will be also described.

2.1. Project Summary

Conceptual: During this phase we will be meeting with the client in order to get an idea of what they hope to get out the software. They will also be able to give us ideas on how they want the user interface to look and operate.

Requirements: After meeting with clients and getting a general understanding of what they want from us we will begin writing up the requirements based on the previous meetings. Once we have the requirements document we will review them with the sponsor and make any changes necessary. We will continue to update the requirements until the sponsor is satisfied.

Development: Once the sponsor has approved all the requirements we will begin development of the actual product for the clients. Throughout this process we will be meeting with the clients to show them the progress on the products. This way the clients can request changes as we are developing the software.

Testing: When the product is done being developed we must test it for every possible scenario. This includes thinking up every possible input scenario in order to ensure the product will never give back an error or timeout.

Delivery: After the software has been fully developed and tested we will present our clients with the finished software and all the documents that will be turned in throughout the project.

2.2. Project Deliverables

Project Abstract:

Start Date: February 27, 2013

Completion Date: March 4, 2013

Provide information regarding our sponsor and their operation. The scope of this document will be basic.

Project Charter:

Start Date: March 11, 2013

Completion Date: April 15, 2013

Provide in detail the approach to our project. Furthermore explain the needs of the sponsor.

Project Management Plan:

Start Date: March 30, 2013

Completion Date: April 25, 2013

Provide detailed information on how the project will be managed and resources will be obtained.

Software Requirements Specifications:

Start Date: April 6, 2013

Completion Date: May 6, 2013

Describe the behavior, scope and dependencies of the system to be developed. Provide explanation on how it will be used.

Fall 2013 Semester**Software Design Specification:**

Start Date: September 7, 2013

Completion Date: September 23, 2013

Provides a high level view of the design and interfaces that the project is based on.

System Test Specification

Start Date: September 23, 2013

Completion Date: October 10, 2013

Sequence of tests to be conducted to 1) to test the system and 2) ensure all possible use cases are covered.

Baseline Code:

Start Date: October 11, 2013

Completion Date: November 29, 2013

Start of the source code to allow the building blocks of the project. Setting up a test environment.

System Test Report:

Start Date: November 29, 2013

Completion Date: December 12, 2013

Resulting test from the System Test Specification.

User Manual, CD, and Installation:

Presentation Date: December 12, 2013

Present the sponsor with:

- i. User Manual
 - 1. A complete guide on how to install and operate the system
- ii. CD
 - 1. Contains source code, executable code, and supplement files
- iii. Installation
 - 1. Initial installation and testing for the system on the clients hardware.

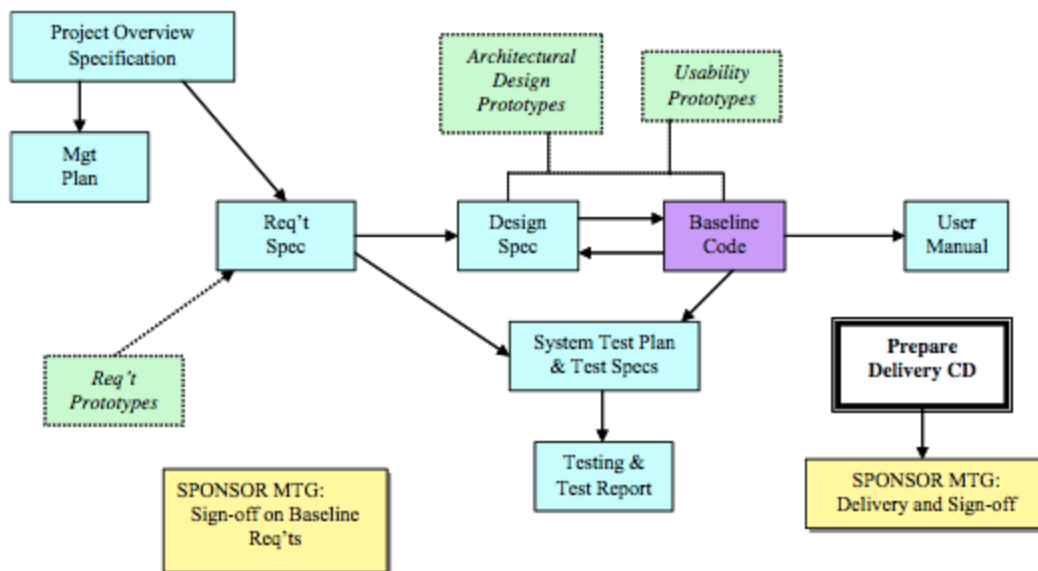
2.3. Evolution of the SPMP

We will use this Project Management Plan to create a project schedule, identify the scope for the project, and to estimate how much work must be done on each part of the documentation and development of the project. When the weekly reviews of progress show that updates need to be made, we will change the documentation, note the changes and time of change in the documentation, and ensure the changes are properly implemented in the final project.

3. PROJECT ORGANIZATION

The section includes an explanation of the phases of work that will be scheduled, monitored and managed throughout the project's development life cycle. Also included is a description of the team's planned organizational structure for both CSc 190 and CSc 191. Individual team member assignments and responsibilities will be also described.

3.1 Process Model



During CSC 190, team sierra will follow the left half of the figure above. During CSC 191, team sierra will follow the right half of the figure above.

Project Specification: The team will have various meeting to find a “solution” to the “problem” presented by the sponsor.

Management Plan (This document): Provide a detailed process for how Team Sirra will conduct and implement its development process based on the provided information of the project specification.

Design Specifications: The design specification that are tailored based on the the sponsors specifications.

Base line-code: The start of the base platform so that the project can be built upon that.

System Test Specification: A series of tests to insure the usability of the system based on the design specifications and sponsors expectations.

3.2 Organization Structure and Interfaces

Team lead and project manager is Scott Livingston during the CSC 190. The project manager responsibilities are:

- Single point of contact for professor Buckley
- Single point of contact for the sponsor
- Delegate during meetings and keep the team on track
- Compose meeting agendas prior to the meeting.

Rest of the team members; Alex Chernyak, Joubin Jabbari, Kyle Metz, Serge Lysak, Mike McParland and Scott Livingston (team lead) are responsible for:

- Recording Minutes
- Contributing equally to all deliverables
 - Documentation
 - Source Code
- Stay connected
 - All members are responsible to stay in touch and keep the communication lines open at all time
- Team members must provide assistance to those who needed
- Team members must ask for assistance when needed

*Note: The entire team will contribute equally to all aspects of this

3.3 Project Responsibilities

All members are equally responsible for completions of all deliverables during CSC 190, 191. During CSC 190, Scott Livingston (team lead) is responsible for capturing approvals. During CSC 191, a new team lead will be chosen who will assume the responsibilities of Scott.

Per section 3.2, Scott Livingston is the project lead for the duration of CSC 190. However, in Team Sierra a project lead has no extra duties other than to be a single point of contact.

Team Sierra hopes to develop and treat all tasks in an Agile manner. This means all members will be present (as much as reasonably feasible.) As a result all members are equally responsible for every word, semi colon in code and page heading.

4. PROJECT MANAGEMENT AND CONTROL

This section of the document will include how the overall project plan will be kept up to date, the objectives and priorities of the project team, how the team members will manage the project, issue and risk management.

4.1 Project Management Objectives and Priorities

The project team's goal is to complete a high quality software system that meets all of the project sponsor's expectations. All of the team members view this overall goal as a high priority. The team will hold a weekly meeting to discuss the current priorities and goals for the project. The Project Log will contain several different types of documents from the team meetings and each team member, that will allow the project team to achieve this goal within the project time limit. This will act as an audit trail so that all of the team members will be able to keep up to date with the progress of the project.

Upon completion of the software the priorities of the project will shift to getting the software to the sponsor and getting the sponsor to be able to use the software system. The software will be personally handed to the project sponsor and the project team will sit down with the project sponsor to teach them how to install and use the software.

4.2 Assumptions, Dependencies, and Constraints

The assumptions, dependencies, and constraints for the project are as follows:

- Time: The time in which this project is to be developed will be over a two semester period, excluding the summer break and all holiday breaks. This two semester period begins on January 28, 2013 and ends on December 13, 2013.
- Compatibility: The system that the project team will develop does not have to be compatible with any currently existing system but will have to interface with a website in the future.
- Money: The project sponsor has a fixed budget to spend on the future usage of the project. Since the project will be web based the hosting costs will be taken into consideration by the project team.
- Feedback: The approval and feedback process of the project will place a constraint on

the project team's development of the project. Due to this, timely feedback from the project sponsor and the faculty advisor is essential.

- Other Obligations of the Project Team: Every member of the project team is a full time student. All of the project team members, excluding Kyle, have work obligations as well.
- The Sponsor: The project is heavily dependent upon the sponsor upholding their agreed upon development responsibilities noted in the Project Charter. These responsibilities include committing enough time to the development process such that the project team is able to maintain a schedule and deliver the project on time, being available for meetings on a periodic basis, approve and provide feedback for documents in a timely and predictable manner, and maintain communication with the project team.
- The Team Members: The project is also heavily dependent upon each team member upholding their agreed upon development responsibilities noted in the project Charter. All team members will share the workload over the lifetime of the project. A team lead is chosen depending on the project phase. The team lead will perform the same tasks as the rest of the team in the scope of the project however, the team lead will act as a single point of contact for our sponsor, team advisor and professor Buckley.

4.3 Risk Management

Team Sierra will use the following risk management process:

1. Brainstorm a list of all possible risks for the project.
2. Determine the probability of the risk occurring (10% = 1 - 100% = 10 scale)
3. Determine the consequence rating (1 - 10 scale): to get comparable consequence ratings the project team will create a table containing the possible ratings, performance, and time delay.
4. Determine the priority rating. The priority rating is a single number created by combining the probability and consequence rating through the use of a combination function.
5. The project team will try to devise ways to avoid the risks from occurring at all.
6. The project team will make a formal decision about how to mitigate consequences when a risk occurs.
7. There will be a list maintained of all the possible risks in the Project Log.

Current high priority risks:

- Team member not upholding their development responsibilities.
- Sponsor not upholding their development responsibilities.

4.4 Change Management

All changes made to any aspect of the project will be handled in the agreed upon method documented in the Project Charter.

Should there be a need to make changes after the documentations process has started, the following should take place:

- All team members must meet with the sponsor to talk about the changes.

- All team members will vote to (Yea) to incorporate the changes or (Nay) to continue with the originally proposed project.

Should there be a need to make changes after the development process has started, the following will take place:

- All team members must meet with the sponsor to talk about the changes.
- All team members will vote to (Yea) to incorporate the changes or (Nay) to continue with the originally proposed project.
- If the changes are accepted, no changes will be made to any documentation other than the user manual.
- Changes will surely delay the time schedule and therefore a new timeline must be submitted.

Should the faculty advisor or project sponsor recommend any changes to the project those recommendations will be taken into consideration by the project team and then go through the formal change process stated above.

Once a change has been approved, all documentation that is affected by that change is to be updated to reflect the change. The change will also be clearly noted in the Project Log with the date the change was made and what the change entailed, with the original version and the newly updated version if necessary.

4.5 Schedule Control

In order to monitor and maintain schedule as much as possible there will be several control mechanisms put in place.

- Reporting Progress: At each weekly team meeting every member of the project team will report their progress on their currently assigned task. Every team member is expected to report an estimate on the percentage completed for their task, an estimate on how much longer the task will take, and announce any issues that have arisen.
- Adjustments: When there is an issue or a risk occurs it will immediately fall into the proper resolution method noted in this document. This will often resulting in adjustments to how the task will be further dealt with.
- Written Reports: All of the reports given by each team member and the adjustments made will be written down and stored in such a way that all members have access to it. Any adjustments made to the schedule will also be made to the baseline schedule. The team as a whole is responsible to monitor the progress of the project through these written reports by comparing them to the schedule.

4.6 Issue Resolution

When any member of the project team has an issue for any reason they will fill out a Issue Notification Form. These forms will be stored in the Project Log and all new Issue Notification Forms will be discussed at the next team meeting.

5. TECHNICAL PROCESS

This section includes a description of the methods the team will use in representing the technical details that will need to be recorded and published during project development. In addition, the team's documentation plan is described along with a list of all documents to be produced over the development life cycle. In addition, this section should describe how documents will be collaboratively modified and the version control process that will be used. In addition, this section should describe coding standards that will be used and the manner in which technical work will be reviewed and approved.

5.1 Methods, Tools and Techniques

Method - In this project we are going to utilize the scalability of object oriented approach. We aim to speed up the development process by implementing all aspects of the project in this manner. This will also allow us to include features not covered early on between us and the sponsor.

Tools - 4 amount of tools in the development of this project.

1. We are going to be using Eclipse as an IDE. Eclipse was using during the development of Spring and provides a stable work environment in which all developers can work in.
2. Spring MVC - Spring was developed as an API to provide an abstraction layer between the transactions of server and client.
3. Tomcat - Tomcat is a web and app server based in apache. This tool will be used to provide the presentation layer to the user.
4. Git - Git is a distributed revision control system that our team will utilize to synchronize the progress made in the development stage and coding.

Techniques - This project is ran using the AGILE technique. All project meetings, planning, and development is done in meetings where all team members are working face to face at the same location around a table.

5.2 Software Documentation

Using Javadocs, we will be able to comment each section of the code for two different purposes. One, during the development stage, it will help the developers to stay current and understand the purpose of said code. Two, we will use the comment blocks to generate Javadocs style documentation which will provide future developers all they will need to make further changes to the application. The generated Javadoc will be given to the project sponsor with the rest of the software system so that it can be easily maintained in the future.

Based on the use cases that will be generated during the development of the SRS, we will create a user manual of the entire application for all parties involved. The user manual will include step by step instructions for each function of the software system, a troubleshooting section, and a glossary of terms used in the manual. This manual will allow any user to quickly

become familiar with and use the software system.

Approach to completing documents

Project Charter

- Write the Project Charter
- Review the Project Charter
- Project Charter First Draft Review by Faculty Advisor
- Revise Project Charter
- Project Charter Final Draft Review by Faculty Advisor
- Review Project Charter with Sponsor

Project Management Plan

- Write SPMP
- Review SPMP
- SPMP First Draft Review by Faculty Advisor
- Revise SPMP
- SPMP Final Draft Review by Faculty Advisor

Software Requirements Specification

- Gather Requirements
- Write SRS
- Review SRS
- Technical Review of SRS
- Revise SRS
- SRS First Draft Review by Faculty Advisor
- Revise SRS
- SRS Final Draft Review by Faculty Advisor
- Review SRS with Sponsor

Software Design Specification

- Write the Software Design Specification
- Review the Software Design Specification
- Software Design Specification First Draft Review by Faculty Advisor
- Revise Software Design Specification
- Software Design Specification Final Draft Review by Faculty Advisor
- Review Software Design Specification with Sponsor

System Test Specification

- Write the System Test Specification
- Review the System Test Specification
- System Test Specification First Draft Review by Faculty Advisor
- Revise System Test Specification
- System Test Specification Final Draft Review by Faculty Advisor

- Review System Test Specification with Sponsor

System Test Report

- Write the System Test Report
- Review the System Test Report
- System Test Report First Draft Review by Faculty Advisor
- Revise System Test Report
- System Test Report Final Draft Review by Faculty Advisor
- Review System Test Report with Sponsor

5.3 Documents

Project Charter

A project charter is a control document that provides a problem statement, along with an overview of the scope, goals, participants and requirements of a project. The purpose of this document is to create a mutual understanding between the team and the sponsor of what is expected over the course of the project.

Software Project Management Plan

The project plan clarifies and defines the project mandate. It establishes the direction of the project and provides a basis for measuring project progress and performance. It defines project context, criteria for success, critical success factors, purpose, objective, scope, assumptions, constraints, system interfaces, risks, preliminary cost/benefits and impact on other organizational units. The project plan identifies the involved organizational units and their level of commitment, in terms of resources, financial investments and work processes.

Software Requirements Specification

The Software Requirements Specification provides feedback to the customer on the requirements agreed upon, and the requirements' breakdown of the software. This document validates that the understanding between the developers and the customer of each requirement.

Software Design Specification

A software design document details how the software requirements should be implemented as well as giving the programmers a blueprint to follow. Once the software design document is approved by the appropriate parties, it becomes a baseline for limiting changes in the scope of the project

System Test Specification

A Test Specification describes test objectives and approach. It also contains a requirements coverage matrix showing every requirement the software system is to meet versus specific, numbered test cases designed to validate that the system meets those requirements. For any

given system requirement, or function, it should be easy to locate in this matrix all relevant test cases.

System Test Report

The System Test Report summarizes the results of the designated testing activities identified in the System Test Specification document and provides evaluations based on these tests.

6. ACTIVITIES AND SCHEDULE

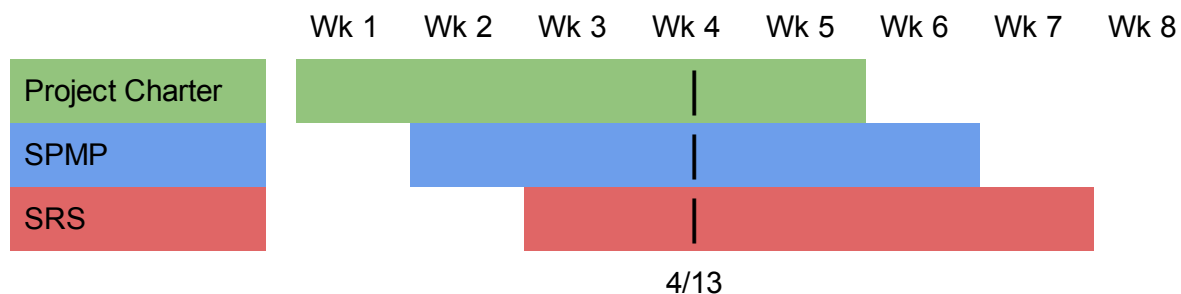
This section contains a description of activities and tasks to be performed in each of the development phases, the resources required to accomplish the work, an estimated (and hypothetical) budget, and the baseline schedule for the project.

6.1 Activities and Tasks

TASK NAME	BASELINE DURATION	BASELINE START	BASELINE FINISH
Gather Requirements	2 hrs	3/18/2013	4/13/2013
Write the Project Charter	11 hrs	3/18/2013	3/28/2013
Review the Project Charter	2 hrs	3/18/2013	3/28/2013
Project Charter First Draft Review by Faculty Advisor	1 hrs	3/28/2013	4/11/2013
Revise Project Charter	2 hrs	4/13/2013	4/13/2013
Project Charter Final Draft Review by Faculty Advisor	1 hrs	4/13/2013	4/16/2013
Review Project Charter with Sponsor	2 hrs	4/19/2013	4/19/2013
Write SPMP	16 hrs	3/30/2013	4/13/2013
Review SPMP	2 hrs	3/30/2013	4/13/2013
SPMP First Draft Review by Faculty Advisor	1 hrs	4/13/2013	4/13/2013
Review SPMP	2 hrs	4/16/2013	4/20/2013
SPMP Final Draft Review by Faculty Advisor	1 hrs	4/20/2013	4/25/2013

Write SRS	20 hrs	4/6/2013	4/20/2013
Review SRS	2 hrs	4/6/2013	4/20/2013
Technical Review of SRS	2 hrs	4/20/2013	4/20/2013
Revise SRS	2 hrs	4/20/2013	4/20/2013
SRS First Draft Review by Faculty Advisor	1 hrs	4/20/2013	4/25/2013
Revise SRS	2 hrs	4/27/2013	4/27/2013
SRS Final Draft Review by Faculty Advisor	1 hrs	4/27/2013	4/29/2013
Review SRS with Sponsor	2 hrs	5/6/2013	5/13/2013

6.2 Schedule



6.3 Resource Requirements

For our system, we will need a server system running a development environment. The cost for this system will be around \$8 a month and \$100 throughout the life of the project. All of the development tools we will be using are free or open source so there will be no cost. The main resource use for this project is our time, and as such we estimated the cost of working on this project to be \$30,000 per member in time.

7. APPROVALS

Project Sponsors

By signing this SPMP you are approving the overview of the project, project organization, project management and control, technical process, activities and schedule defined in this document.

Lisa Sigurdson _____

Alayna Sigurdson _____

Advisor

By signing this PMP you are approving the overview of the project, project organization, project management and control, technical process, activities and schedule defined in this document.

Ahmed M Salem _____

Team Sierra

By signing this SPMP you are agreeing to the conditions and and commitments required to carry out the plans for the overview of the project, project organization, project management and control, technical process, activities and schedule defined in this document

Alex Chernyak _____

Joubin Jabbari _____

Kyle Matz _____

Mike McParland _____

Scott Livingston _____

Serge Lysak _____