Life Cycle Plan (LCP)

LADOT SCANNING

Team 8

Team members	Primary Role	Secondary Role
Aditya Kumar	Feasibility Analyst	Project Manager
Anirudh Govil	Project Manager	Lifecycle Planner
Corey Painter	IIV&V	Shaper
Jeffrey Colvin	Prototyper	Systems and Software Architect
Niraj Brahmkhatri	Operational Concept	Requirements Engineer
Nisheeth Joshi	Systems and Software Architect	Life cycle Planner

12/10/11

Version History

Date	Author	Version	Changes made	Rationale
9/26/11	Anirudh Govil	1.0	Skills defined for each role and updated changes in Section 3.3	Part of Formal VC Package.
10/03/11	Anirudh Govil	1.1	Skills defined for each role and updated changes in Section 3.3	Make the documents more accurate
10/07/11	Anirudh Govil	1.2	Skills defined for each role and updated changes in Section 3.3	Fixed errors in v1.1
10/07/11	Anirudh Govil	2.0	Skills defined for each role and updated changes in Section 3.3	Fixed errors in v1.2 as per TA correction
10/09/11	Nisheeth Joshi	2.1	Technical skill for team member and section 1	Updated as per TA correction and DEN student bug report
10/14/11	Nisheeth Joshi	2.2	Completed all sections	Filled all the sections as per bug reported by den student
10/23/11	Anirudh Govil	3.0	Add the development phase	As instructed by TA during ARB
10/31/11	Anirudh Govil	3.1	Updated the errors	As reported by DEN student
11/14/11	Anirudh Govil	3.2	Rectified the errors	As instructed by TA
11/20/11	Anirudh Govil	4.0	Corrected errors	As reported by DEN student
12/3/11	Anirudh Govil	4.1	Rectified the errors	As instructed by TA
12/10/11	Anirudh Govil	4.2	Corrected the errors	As reported by DEN Student

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There are notable of figures needed in this document.

1. Introduction

1.1 Purpose of the LCP

A life cycle plan is an artifact which ensures that all the milestones set up by the team are achievable. A life cycle plan document is helpful in asking question like what is it for us in this project, what are the milestones and how can we achieve them, what are team member roles and skills, who best can solve a particular task (based on individual skills). These and many other processes must be document for guidance purpose.

1.2 Status of the LCP

This is the 4.1 version of the LCP document covering all the important artifacts set up till date.

1.3 Assumptions

- Client interaction will be held once in a week
- The project is of 12 weeks duration.
- The requirements from the client are now stable and not change dramatically.

2. Milestones and Products

2.1 Overall Strategy

The LADOT Scanning system will be following the Architected Agile version of the Incremental Commitment Spiral Model. The time will be working to automate the timesheet entering process.
Exploration Phase
Duration: 09/09/2011– 10/03/2011
Concept: This phase involves team to have meetings with client in order to understand his requirements and also get to know the risks and the decisions that are concern for the stakeholders.
Deliverables: Valuation Commitment Package
Milestone: Valuation Commitment Review
Strategy: Meetings-dependent

Valuation Phase
Duration: 10/04/11 – 10/19/11
Concept:
In this phase complete analysis of system and software architecture, system and software requirement, feasibility evidence and life cycle plan will be accomplished. Along with this, the team will have a more detailed understanding of the requirements. Some of the requirements might have some issues with them. They will have to be discussed with the client in order to ensure that it is a win win situation for all. New solutions might be also suggested in order to incorporate these requirements.
Deliverable: Foundations Commitment Package
Milestone: Foundations Commitment Review
Strategy: Meetings and prototype dependent

Foundations Phase
Duration: 10/19/11 – 10/24/11
Concept: In this phase, team will present prototype of the system. On evaluation of the prototype, any issues that are found must be conveyed to the success-critical stakeholders.
Deliverable: Development Commitment Package
Milestone: Development Commitment Review
Strategy: Procedure and functional prototype development

Development phase - Construction Iteration
Duration: 10/25/11 – 11/21/11
Concept: A prototype system is presented to the client based on the previous design and architecture. This prototype is reused by the development team to speed up the process. Since the prototype has been tested thoroughly, this results in reduced risks.
Deliverable: Core Capability Drive-through Package, Transition Readiness Review Package
Milestone: Core Capability Drive-through, Transition Readiness Review
Strategy: Development and test

Development phase - Transition Iteration
Duration: 11/22/11 – 12/05/11
Concept: The documents for information and procedures for client are prepared so that the transition can happen easily. Knowledge transfer is done to the client, the users and the maintainer.
Deliverable: Operational Commitment Review Package
Milestone: Operational Commitment Review
Strategy: Training, Transition

2.2 Project Deliverables

2.2.1 Exploration Phase

Table 1: Artifact deliverable in Exploration Phase

Artifact	Due date	Format	Medium
Client Interaction Report	09/21/11	.doc,.pdf	Soft copy
Valuation Commitment Package • Operational Concept Description (OCD) Early Section • Life Cycle Plan (LCP) Early Section • Feasibility Evidence Description (FED) Early Section	09/28/2011	.doc,.pdf	Soft copy
Evaluation of VC Package	10/03/2011	.doc,.pdf	Soft copy, Bugzilla
Effort Report	Every Monday	Text	ER system
Project Plan	Every Wednesday	.mpp	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.2 Valuation Phase

Table 2: Artifact deliverable in Valuation Phase

Artifact	Due date	Format	Medium
Response to Evaluation of VC Package	10/07/2011	.doc,.pdf	Soft copy, Bugzilla
Core Foundations Commitment Package • Feasibility Evidence Description (FED) • Life Cycle Plan	10/07/2011	.doc, .pdf	Soft Copy

(LCP) • Operational Concept Description (OCD) • Supporting Information Document (SID) • System and Software Architecture Description (SSAD) • System and Software Requirements Definition (SSRD)			
Evaluation Of Core Foundation Commitment Package	10/10/2011	.doc, .pdf	Soft copy
Draft FC Package	10/14/2011	.doc,.pdf	Soft copy
Evaluation of Draft FC Package	10/17/2011	.doc,.pdf	Soft copy
Effort Report	Every Monday	Text	ER system
Project Plan	Every Wednesday	.mpp	Soft Copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.3 Foundations Phase

Table 3: Artifact deliverable in Foundations Phase

Artifact	Due date	Format	Medium
Development Commitment Package	10/24/2011	.doc, .pdf	Soft copy
Evaluation of Development Commitment Package	10/24/2011	.doc, .pdf	Soft copy
Effort Report	Every Monday	Text	ER system
Project Plan	Every Wednesday	.mpp	Soft Copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.4 Development Phase

Artifact	Due date	Format	Medium
Core Capability Drive-through package	11/11/2011	.doc, .pdf	Soft copy
Evaluation of Core Capability Drive-through package	11/11/2011	.doc, .pdf	Soft copy, Bugzilla
Transition Readiness	11/21/2011	.doc,.pdf	Soft copy, Bugzilla

Review Package			
Evaluation of Transition Readiness Review Package	11/28/2011	.doc,.pdf	Soft copy
Operational Commitment Review Package	12/05/2011	.doc,.pdf	Soft copy
Evaluation of Operational Commitment Review Package	12/02/2011	.doc,.pdf	Soft copy, Bugzilla
Effort Report	Every Monday	Text	ER system
Project Plan	Every Wednesday	.mpp	Soft Copy
Progress Report	Every Wednesday	.xls	Soft copy

3. Responsibilities

3.1 Project-specific stakeholder's responsibilities

The clients and stakeholders are jointly responsible for meeting with team in order to gather the system requirements, reduce the risks and make decisions for the same. They also give feedback on the work done by the developers. The Los Angeles department of transportation will be affected by the scanning system. The field workers are also an important stakeholder as they are the ones who will use this system.

3.2 Responsibilities by Phase

Table 6: Stakeholder's Responsibilities in each phase

	Primary / Secondary Responsibility				
Team Member / Role	**Exploration**	**Valuation**	**Foundations**	**Development-** Construction Iteration	**Development-** Transition Iteration
Aditya Kumar: Feasibility Analyst / Operational Concept Engineer	**Primary Responsibility** -Identify risk items -Track risks throughout project **Secondary Responsibility** -Analyze Current System -Explore alternatives	**Primary Responsibility** -Identify risk mitigation -Track and evaluate risks throughout project **Secondary Responsibility** -Explore alternatives -Evaluate propose system	**Primary Responsibility** -Identify business risk items -Track risks throughout project **Secondary Responsibility** -Analyze Current System -Evaluate propose system -Evaluate prototype	**Primary Responsibility** -Identify risk items -Track risks throughout project	**Primary Responsibility** -Identify risk items -Track risks throughout project **Secondary Responsibility** - Train the users
Anirudh Govil: Project Manager / Feasibility Analyst	**Primary Responsibility** -Plan Project Life Cycle -Track Progress of the project **Secondary Responsibility** -Identify risk items -Track risks throughout project	**Primary Responsibility** -Track team member's effort progress -Track Progress of the project **Secondary Responsibility** -Identify risk items -Track risks throughout project	**Primary Responsibility** -Analyze project life cycle. **Secondary Responsibility** -Identify risk items -Track risks throughout project	**Primary Responsibility** -Analyze the second phase of the project -Track Progress for the second project **Secondary Responsibility** -Identify risk items -Track risks throughout project	**Primary Responsibility** -Plan Project Life Cycle -Track Progress of the project **Secondary Responsibility** -Identify risk items -Track risks throughout project

Corey Painter: IIV&V / Shaper	**Primary Responsibility** -Interact with the clients to understand the system better -Verify and validate the work products **Secondary Responsibility** -Set up Win Win Negotiations context	**Primary Responsibility** -Interact with the clients to understand the system better -Verify and validate the work products **Secondary Responsibility** -Assess Quality Management Strategy -Identify Quality Management Strategy	**Primary Responsibility** -Interact with the clients to understand the system better -Verify and validate the work products **Secondary Responsibility** -Set up Win Win Negotiations context -Assess Quality Management Strategy -Identify Quality Management Strategy	**Primary Responsibility** Identify the defects in the items delivered **Secondary Responsibility** Test the system delivered	**Primary Responsibility** - Train the users
Jeffrey Colvin: Prototyper / Systems and Software Architect	**Primary Responsibility** -Understand the current system **Secondary Responsibility** -Explore the technologies to be used in project -Model the system	**Primary Responsibility** -Assess prototype and components -Develop initial prototype **Secondary Responsibility** -Develop UML model -Model the system	**Primary Responsibility** -Analyze and prioritize capabilities -Develop prototype **Secondary Responsibility** -Model the system -Analyze the proposed system	**Primary Responsibility** -Assess Traceability Matrix - Tailor Components -Develop the product	**Primary Responsibility** - Deploying the product on the client's machine -Train the users
Niraj Brahmkhatri: Operational Concept / Requirements Engineer	**Primary Responsibility** -Analyze Current System -Explore alternatives **Secondary Responsibility** -Gather requirements from clients -Develop requirements definition	**Primary Responsibility** -Evaluate propose system -Explore alternatives **Secondary Responsibility** -Prioritize requirements -Develop requirements definition	**Primary Responsibility** -Evaluate prototype -Prioritize requirements	**Primary Responsibility** -Develop Support plan - Develop transitions plan	**Primary Responsibility** - Train the users
Nisheeth Joshi: Systems and Software Architect / Lifecycle Planner	**Primary Responsibility** -Explore the technologies to be used in project	**Primary Responsibility** -Develop UML model -Explore the	**Primary Responsibility** -Model the system -Analyze the	**Primary Responsibility** -Develop the system well **Secondary**	**Primary Responsibility** - Train the users

	-Model the system **Secondary Responsibility** -Prepare life cycle plan	technologies to be used in project -Model the system **Secondary Responsibility** -Prepare life cycle plan -Assess lifecycle content -Identify lifecycle management approach -Identify tasks and responsibilities	proposed system **Secondary Responsibility** -Assess lifecycle content -Assess the time needed for the completion of tasks	**Responsibility** -Identify development iteration	

3.3 Skills

Table 7: Team members and skills

Team members	Role	Skills
Aditya Kumar	P-Feasibility Analyst S- Operational Concept Engineer	**Management Skills:** Planning & Coordination Skills, Interpersonal skills **Technical Skills:** XML, SQL, CCNA, UML **Tools Known:** Cocomo II, Eclipse
Anirudh Govil	P-Project Manager S- Lifecycle Planner	**Management Skills:** Inter Personal Skills, Project Plan Development, Risk Management Skills **Technical Skills:** C, C++, JAVA, HTML, XML, SQL, COTIPMO **Tools Known:** Syslog-ng, Cocomo II,
Corey Painter	P-IIV&V S-Shaper	**Management Skills:** Experience managing small teams **Technical Skills:** C, C++, Objective C, XML **Tools Known:** Visual Studios,

		XCode, COCOMO II
Jeffrey Colvin	P-Prototyper S- Systems and Software Architect	**Management Skills:** Project Planning, Inter Personal Skills **Technical Skills:** C, C++, C#, Java, PERL, UML Modeling, RSM, WPF, ASP.NET **Tools Known:** Visual Studios, XCode, eclipse, bash Shell
Niraj Brahmkhatri	P-Operational Concept S- Requirements Engineer	**Management Skills:** Debugging skills **Technical Skills:** SQL, Apache, Tomcat, C#, ActionScript, UML **Tools Known:** Cocomo II, RedHat, Fedora
Nisheeth Joshi	P-Software Architect S- Life cycle Planner	**Management Skills:** Project Planning, Interpersonal Skills **Technical Skills:** JAVA, HTML, Oracle, SQL, RSM, UML Modeling, COTIPMO **Tools Known:** Cocomo II, NetBeans

4 Approach

4.1 Monitoring and Control

The execution of lifecycle of the project will be analyzed by the team member during the weekly meetings. We believe verbal communication and face-face communication is the best method to keep track of everyone's progress. Also, having hard copies of the individual effort and work report of team members is beneficial for future reference.

4.1.1 Closed Loop Feedback Control

Team members prefer email communication with the LADOT google group. This is an effective means of communication as all members of the teams are involved.

4.1.2 Reviews

Reviews will be relayed via email through LADOT google group.

4.2 Methods, Tools and Facilities

Table 8: Tools, Usage and Provider

Tools	Usage	Provider
Team Website	Documentation of work and client meeting notes	USC
Bugzilla	Reports the errors and defects	USC
Rational Software Modeler	UML Modeling	IBM
COCOMO II	Estimation of schedule and feasibility	USC
Email	Communication with the team members	USC
Skype	Used for Communication between off campus and on campus Students.	Skype Ltd.
Microsoft Project	Build project plan for the team	Microsoft
Win Book	Provide a platform between various stakeholder, client and team that helped in making the WinWin negotiation a lot easier and transparent	USC
iCard	Maintenance of individual effort records	USC

5. Resources

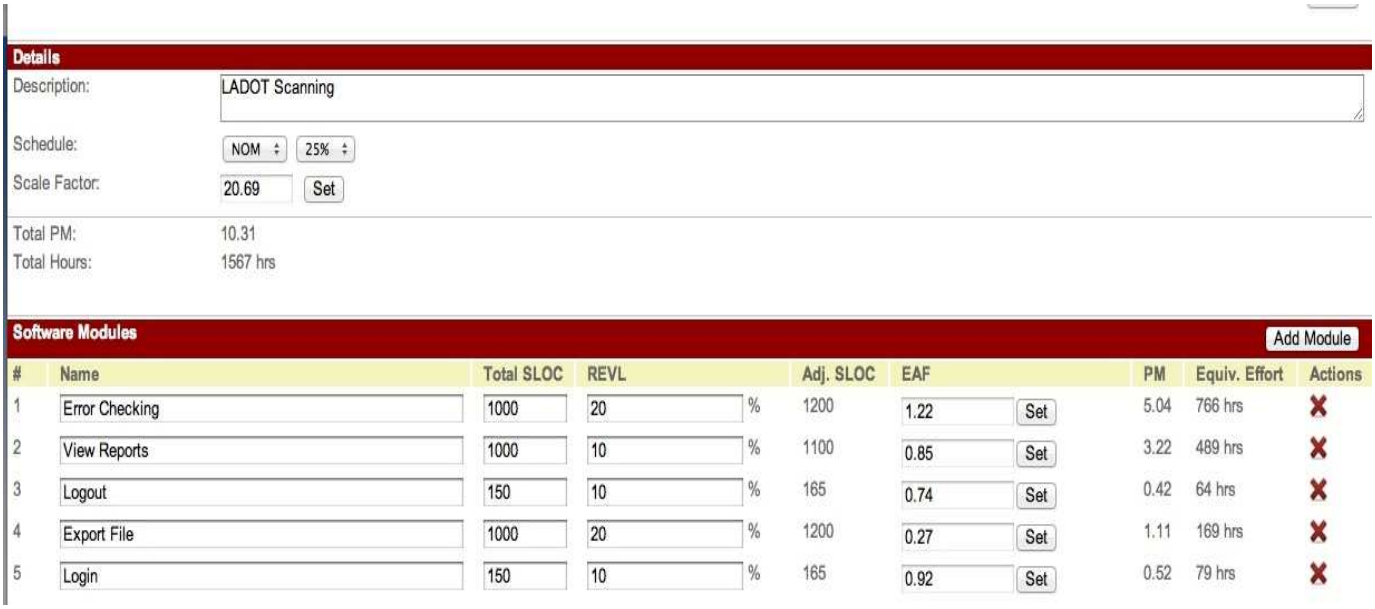
The ratings of the various scales and cost drivers are:

Table 9: Cost Drivers

Cost Driver	Value	Rationale
ACAP	HI	The team members have good communication & technical skills
PCAP	HI	The team members have worked on similar module in previous projects
PCON	HI	This is a 1 semester project and all of the team members will work on the project in the whole semester
APEX	NOM	The team has some experience in building such a system
LTEX	NOM	Most of the team members know C#, ASP.NET, WPF
PLEX	NOM	The members have worked on different tools used and can complete the project easily
TOOL	LO	The form will have a simple log in and log out feature

The project estimates calculated by the COTIPMO tool are.

The development team is not going to reuse any of the components, thus % reuse is 0.



Estimated Effort = 10.2 Persons Months (Most Likely)
Estimated Effort= 7.6 Months (Most Likely)
No. of team members = 10.31 / 1.67 = 6.17
This can be done by 5 on-campus students and 1 DEN student.