# Life Cycle Plan (LCP)

**United Directed Marketing**

**Team 9**

**Fall Semester**

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**Yen-Kuo Kao – Operational Concept Engineer**

**Spring Semester**

**Chun-Pei Su – Trainer / Document Maintainer**

**Shao-yen Cheng – Chief Developer**

**Stewart Allen – Tester / IIV&V / Quality Focal Point**

**Kelvin Zhu – Project Manager / Developer**

### 

**May 2, 2013**

# Version History

| Date | Author | Version | Changes made | Rationale |
| --- | --- | --- | --- | --- |
| 09/26/12 | CS | 1.0 | Fill out the sections 1.1, 1.2, 1.3 and 3.2, 3.3 Identify all the rolls and skills of the members of development team | Understand the purpose of the LCP and identify the responsibilities of each rolls and skills of development team |
| 09/30/12 | CS | 1.1 | Updated sections 2.1, 2.2, 3.1 4.1, 4.2  Modify contents | Set the schedule and discuss the details of development strategy |
| 10/03/12 | CS | 1.1 | Updated sections 3.1,3.2,3.3 | Bug #7060, Redefined and updated roles of team members |
| 10/05/12 | CS | 1.1 | Updated sections 1.3,2.1,2.2 | Schedule 577b and update overall strategy. Adding assumptions. |
| 10/10/12 | CS | 1.2 | Modified section 3.3 and updated 4.2 | Correct current skills from grader’s comment |
| 10/14/12 | CS | 2.0 | Satisfy the minimum exit criteria of LCP for Core FCP | Core FCP |
| 10/19/12 | CS | 2.1 | Update the section 2 and section 5 | Update the Milestones and products. Estimate the module cost by using COCOMO |
| 10/20/12 | CS | 2.1 | Satisfy the minimum exit criteria of LCP for Draft Core FCP | Draft FCP |
| 10/22/12 | CS | 2.1 | Update the section 5 | Using COTIPMO to estimate the costs of modules |
| 10/30/12 | CS | 2.2 | Update the section 3.3 | Adding current and required skills based on the TA’s comments. Also, satisfy the ARB condition |
| 11/03/12 | CS | 2.2 | Modified section 1.3, 2.1 and satisfy the criteria of FCP | Suggestions made in the ARB  Meeting |
| 11/12/12 | CS | 2.2 | Modified the section 2.1 | Fixed Bug#7474 |
| 11/19/12 | CS | 2.3 | Modified section 1.2, 2, 3, 5 | Corrected errors and updated schedule, responsibilities and COCOMO based on TA’s comments |
| 11/24/12 | CS | 3.0 | Satisfy the minimum exit criteria of DCP for Draft DCP | Draft DCP |
| 11/29/12 | CS | 3.1 | Update the section 3 | Suggestions made in the DCR ARB  Meeting |
| 12/08/12 | CS | 3.2 | Satisfy the minimum exit criteria of LCP for DCP | Updated section 6 |
| 1/27/13 | KZ | 3.3 | Fixed spelling and grammar typos throughout document  Updated team member list with members from Spring semester | Correcting typos  Updating with new team roster |
| 2/09/13 | CS | 4.0 | Satisfy the minimum exit criteria of LCP for Draft RDC package | Re-estimate COCOMO and fix any change in 577b |
| 2/19/13 | CS | 4.1 | Satisfy the minimum exit criteria of LCP for RDC package. We change architecture agile to NDI single | Reviewed and revised all the documents because we changed into NDI single |
| 3/11/13 | CS | 4.2 | Modified the section 3.1 | Fixed Bug#8091 |
| 3/27/13 | CS | 5.0 | Satisfy the minimum exit criteria of LCP of IOC1 | Updated section 6.1,6.2 |
| 3/27/2013 | SA | 5.1 | Updated section 6.2 | Preparing for CCD |
| 4/10/13 | CS | 5.2 | Updated section 6.1 and 6.2 | After CCD the team got feedback and try to fixed the bugs/issues. Satisfied CCD exit criteria |
| 5/03/13 | CS | 5.3 | Update section 1,6 | Update COPTIMO and satisfy the exit criteria |

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* + 1. Introduction

#### Purpose of the LCP

The purpose of the life cycle plan is to assess the Life cycle content, identify the responsibilities and skills of each team members. This artifact can clearly depict the most common questions about a project or activities during development: why? (Objectives to be achieved), whereas? (Assumption), what? (Milestones), when? (Products (to be delivered)), who? (Responsibilities), where? (Location), how? (Approach), how much? (Resources)

#### Status of the LCP

This version of the Life Cycle Plan document is at the final phase with a version number 5.3. This version updated the section 1 and 6.

#### Assumptions

* The duration of the project is 24 weeks, which are 12 weeks in fall 2012 and 12 weeks in spring 2013.
  + All the success-critical stakeholders, team members and clients understand their responsibilities clearly.
  + The system is able to market and the market share is remaining to be captured.
  + The client will not change the system requirements without discussing.
  + The team members, clients, and the entire critical stakeholders will discuss to each other immediately once there a problem has happened.

#### 2 Milestones and Products

#### Overall Strategy

Our team will adopt the single NDI pattern to develop the United Directed Marketing (UDM) project. We use Fuel and CodeiIgniter tools (PHP based) to develop our system. The team follows ICSM to develop the system and review the milestones at each phase. First, we keep discussing and negotiating with clients to capture the requirements and commitments. Moreover, the team produces the artifacts to make sure the details are recorded in documents. After all the requirements are confirmed, the team starts to develop the prototype. We schedule the activities in the Exploration phase, Valuation phase and Foundation phase in the 577a course. In the 577b course, the team implements the system. When the prototype is finished that team tests and transitions the system to the final live product.

**Exploration phase**

**Duration**: 09/12/2012- 10/03/2012

**Concept**: In the Exploration phase, we identify project concept, system requirements, and system architecture. Also, we discuss with the client about the details of the prototype.

**Deliverables**:

1. Client Interaction Report

2. Valuation Commitment Package

**Milestone**: Valuation Commitment Review

**Strategy**: One Incremental Commitment Cycle

**Valuation phase**

**Duration:** 10/04/2012- 11/05/2012

**Concept:** In the Valuation phase, team members paid a lot of effort to analyze system requirements and reconfirm the requirements with all critical-success stakeholders. Once all the requirements are confirmed and ready, the team starts to develop the prototype of system.

**Deliverables**:   
1. Core Foundations Commitment Package,

2. Draft Foundations Commitment Package

3.Foundations Commitment Package

**Milestone**: Foundations Commitment Review

**Strategy**: Win-Win negotiation, confirm the requirements to develop prototype

**Foundations phase**

**Duration:** 11/06/2012- 12/10/2012

**Concept:** In the Foundation phase, the team follows the system requirements and commitments to develop the prototype that satisfies high priority functions of system. During the development, any problems that happen should be discussed with clients and stakeholders immediately. In addition, the team produces test and transition plans.

**Deliverables**:   
1.Draft Development Commitment Package

2. Development Commitment Package

**Milestone**: Development Commitment Review

**Strategy**: Prototype development, weekly meeting

**Rebaselined Foundations phase**

**Duration:** 1/14/2013- 2/15/2013

**Concept:** The prototype has to be reviewed and rebaselined. The team members need to have a plan of avoiding risks and transition strategies.

**Deliverables**: Rebaselined Foundations Commitment Package

**Milestone**: Rebaselined Foundations Commitment Review

**Strategy**: Reassessment, weekly meeting

**Development (construction iteration) phase**

**Duration:** 2/16/2013- 4/13/2013

**Concept:** In the Development phase, the team implements the system following the iterations. Before testing and transiting, the potential risks should be analyzed and resolved.

**Deliverables**:   
1.Transition Readiness Review Package

2. Draft Transition Readiness Review Package

**Milestone**: Transition Readiness Review

**Strategy**: Implementation, System analysis, weekly meeting

**Development (transition iteration) phase**

**Duration:** 4/14/2013- 5/3/2013

**Concept:** In the Development (transition iteration) phase, the system should be transitioned and installed successfully. Clients and stakeholders should be able to easily operate the system and have a training program for their employees.

**Deliverables**: Transition package, Operation Commitment Package

**Milestone**: Operation Commitment Review

**Strategy**: Transition, training, weekly meeting

#### Project Deliverables

This section shows all the artifacts required, deadline as well as format.

##### Exploration Phase

Table 1: Artifact deliverable in Exploration Phase

|  |  |  |  |
| --- | --- | --- | --- |
| **Artifact** | **Due date** | **Format** | **Medium** |
| **Client Interaction Report** | 9/19/2012 | .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 | 10/03/2012 | .doc, .pdf | Soft copy |
| **Project Effort Report** | Every Monday | .text | Soft copy |
| **Progress Report** | Every Wednesday | .xls | Soft copy |
| **Project Plan** | Every Wednesday | .mpp | Soft copy |

##### 2.2.2 Valuation Phase

Table 2: Artifact deliverable in Valuation Phase

|  |  |  |  |
| --- | --- | --- | --- |
| **Artifact** | **Due date** | **Format** | **Medium** |
| **Core Foundations Commitment Package**   * Operational Concept Description (OCD) * Life Cycle Plan (LCP) * Feasibility Evidence Description (FED) * Prototype (PRO) * System and Software Architecture Description (SSAD) * Win Conditions Prioritization * Supporting Information Document (SID) | 10/15/2012 | .doc, .pdf | Soft Copy |
| **Draft Foundations Commitment Package**   * Operational Concept Description (OCD) * Life Cycle Plan (LCP) * Feasibility Evidence Description (FED) * Prototype (PRO) * System and Software Architecture Description (SSAD) * Win Conditions Prioritization * Supporting Information Document (SID) | 10/22/2012 | .doc, .pdf | Soft Copy |
| **Foundations Commitment Package**   * Operational Concept Description (OCD) * Life Cycle Plan (LCP) * Feasibility Evidence Description (FED) * Prototype (PRO) * System and Software Architecture Description (SSAD) * Win Conditions Prioritization * Supporting Information Document (SID) * Quality Management Plan (QMP) | 11/05/2012 | .doc, .pdf | Soft copy |
| **Project Effort Report** | Every  Monday | .text | Soft copy |
| **Progress Report** | Every Wednesday | .xls | Soft copy |
| **Project Plan** | Every Wednesday | .mpp | Soft copy |

##### Foundations Phase

Table 3: Artifact deliverable in Foundations Phase

|  |  |  |  |
| --- | --- | --- | --- |
| **Artifact** | **Due date** | **Format** | **Medium** |
| **Draft Development Commitment Package**   * Operational Concept Description (OCD) * Life Cycle Plan (LCP) * Feasibility Evidence Description (FED) * Prototype (PRO) * System and Software Architecture Description (SSAD) * Win Conditions Prioritization * Supporting Information Document (SID) * Quality Management Plan (QMP) * Test Plan (TP) * Test Plan and Cases (TPC) | 11/26/2012 | .doc, .pdf | Soft Copy |
| **Development Commitment Package**   * Operational Concept Description (OCD) * Life Cycle Plan (LCP) * Feasibility Evidence Description (FED) * Prototype (PRO) * System and Software Architecture Description (SSAD) * Win Conditions Prioritization * Supporting Information Document (SID) * Quality Management Plan (QMP) * Test Plan (TP) * Test Plan and Cases(TPC) | 12/10/2012 | .doc, .pdf | Soft Copy |
| **Project Effort Report** | Every  Monday | .text | Soft copy |
| **Progress Report** | Every Wednesday | .xls | Soft copy |
| **Project Plan** | Every Wednesday | .mpp | Soft copy |

##### Rebaselined Development Phase

Table 4: Artifact deliverable in Rebaselined Development Phase

|  |  |  |  |
| --- | --- | --- | --- |
| **Artifact** | **Due date** | **Format** | **Medium** |
| **Rebaselined Development Commitment Package**   * Operational Concept Description (OCD) * Life Cycle Plan (LCP) * Feasibility Evidence Description (FED) * Prototype (PRO) * System and Software Architecture Description (SSAD) * Win Conditions Prioritization * Supporting Information Document (SID) * Quality Management Plan (QMP) * Test Plan (TP) * Test Plan and Cases(TPC) * UML diagram | 02/20/2013 | .doc, .pdf | Soft Copy |
| **Progress Report** | Every Wednesday | .xls | Soft copy |
| **Project Plan** | Every Wednesday | .mpp | Soft copy |

##### Development Phase

Table 5: Artifact deliverable in Development Phase (construction)

|  |  |  |  |
| --- | --- | --- | --- |
| **Artifact** | **Due date** | **Format** | **Medium** |
| **Initial Operational Capability Package**   * Operational Concept Description (OCD) * Life Cycle Plan (LCP) * Feasibility Evidence Description (FED) * System and Software Architecture Description (SSAD) * Win Conditions Prioritization * Supporting Information Document (SID) * Quality Management Plan (QMP) * Test Plan and Cases (TPC) * Test Procedure and Results (TPR) * UML diagram * Iteration Assessment Report | 04/01/2013 | .doc, .pdf | Soft copy |
| **Core Capability Drive-Thru Report**   * CCD Report * Code Count Report * Code Count Output file * COCOMO II Estimation Uncertainty At CCD * COCOMO Report * Value-based Testing Procedure and Results | 04/10/2013 | .doc, .pdf | Soft Copy |
| **Project Effort Report** | Every  Monday | .text | Soft copy |
| **Progress Report** | Every Wednesday | .xls | Soft copy |
| **Project Plan** | Every Wednesday | .mpp | Soft copy |

Table 6: Artifact deliverable in Development Phase (transition)

|  |  |  |  |
| --- | --- | --- | --- |
| **Artifact** | **Due date** | **Format** | **Medium** |
| **Transition Readiness Review Package**   * Transition Plan (TP) * User Manual (UM) * Support Plan (SP) * Training Materials (TM) * Regression Test Package (RTP) | 04/15/2013 | .doc, .pdf | Soft Copy |
| Support and Transition Set Package | 04/22/2013 | .doc, .pdf | Soft Copy |
| Close Out Report | 05/10/2013 | .doc, .pdf | Soft Copy |
| Project Archive | 05/04/2013 | .zip | Soft Copy |
| **Project Effort Report** | Every  Monday | .text | Soft copy |
| **Progress Report** | Every Wednesday | .xls | Soft copy |
| **Project Plan** | Every Wednesday | .mpp | Soft copy |

1. Responsibilities

#### Project-specific stakeholder’s responsibilities

The client and related success-critical stakeholder responsibilities involve regular Win-Win negotiation, project progress report, analyze potential risks, as well as project commitment review. The following table indicates all the stakeholders’ responsibilities.

Table 6: Stakeholders’ Roles and Responsibilities

|  |  |
| --- | --- |
| **Roles** | **Responsibilities** |
| All stakeholders | * Participate in Win-Win negotiations and periodic meetings * Cooperate to develop and solve tasks * Test the prototype and advise through feedback * Abide by commitments |
| Client: Samta, president of United Directed Marketing | * Provide Marketing Analysis Information to customers * Track development progress and set up the priority of system development * Coordinate with designer and developer |
| UDM (United Directed Marketing) company | * Review and test the system then provide the appropriate feedback * Support system transition * Estimate the development budget to control the cost * Plan and implement the training program to employees * Maintain the system * Provide training to employees and users |
| Developer (team members) / Tester | * Collect win conditions and accurate requirements * Analyze current system and capture the system requirements * Design the system architecture * Build a complete operation environment to client * Develop and test the prototype satisfying system requirements * Support system transition * Identify the risks and solve them before entering the next phase * Produce the artifacts to meet the milestones * Provide training to client / UDM |
| Designer | * Design attractive User Interface * Negotiate and discuss the details of project with client and developers |
| Customers/ Users | * Provide feedback to the Samta and UDM * Discuss the marketing products with Samta by using system |

#### Responsibilities by Phase

The following table shows the responsibilities of each team member in each phase.

Table 7: Development team’s Responsibilities in each phase

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Team Member / Role** |  | **Primary / Secondary Responsibility** | | | |  |
| **Exploration** | **Valuation** | **Foundations** | **Rebaselined  Development**  **Commitment** | **Development-** Construction Iteration | **Development-** Transition Iteration |
| **Chun-Ling Chen**  Project Manager (PM),  Prototyper (PT), | **PM**: Detail Project Plan, Record Project Progress | **PM**: Plan and Manage Project  **PT:** Analyze and Prioritize Capabilities to Prototype,  Identify Objectives, Constraints and Priorities | **PM**: Plan and Manage Project  **PT:** Analyze and Prioritize Capabilities to Prototype, Prototyping | **None** | **None** | **None** |
| **Chun-Pei Su**  Lifecycle Planner (LCP), UML Modeler  (UML), Trainer(TR) | **LCP:** Identify Responsibilities and Skills, | **LCP:** Estimate Project Effort and Schedule using COCOMO II,  Identify Life Cycle Management Approach  **UML**: Analyze  Proposed System | **LCP:**  Detail Project Plan  **UML**: Build UML Model | **Team Support**  Document maintainer | **LCP**:  Assess Development Iteration **Team Support** | **TR:** provide training |
| **Shao-yen Cheng** System Architect (SA), UML Modeler  (UML),  Developer(D), | **Team Support** | **SA**: Analyze the Proposed System, Define Technology-Independent Architecture,  Specify Architecture Styles, Patterns and Frameworks  **UML**: Analyze  Proposed System | **SA**: Assess project status  **UML**: Build UML Model | **D:** Develop Glue Code, Integrate Components, Fix Defects | **D:** Develop Glue Code, Integrate Components, Fix Defects | **D:** Transition The System |
| **Yuan-Chang Chang**  Feasibility Analyst (FA), Tester(T) | **FA**: Assess and Plan to Mitigate Risks | **FA**: Explore Alternatives, Provide Project Feasibility Evidence, analyze business case | **FA**: Assess Feasibility Evidence,  Assess and Plan to Mitigate Risks | **None** | **None** | **None** |
| **Stewart Allen**  IIV&V (VV) , Quality Focal Point (QFP),  Requirements Engineer (RE), Tester(T) | **Team Support** | **VV**: Plan and Manage Project,  Verify and Validate Work Products  **RE**: Assess requirements definition,  Analyze the Proposed System | **VV**: Plan and Manage Project,  Verify and Validate Work Products  **RE**:  Assess requirements definition | **QFP:** Identify Test Plan  **VV**: Manage Project Quality | **QFP:** Identify Test Plan  **VV**: Manage Project Quality  **T:** Identify Test Plan, Identify Test Procedures, Perform Testing, Record Test Results | **T**: Test the system |
| **Yen-Kuo Kao** Operational Concept Engineer (OCE), Tester(T),  Developer(D) | **OCE**: Analyze current system | **OCE**: Analyze the Proposed System,  Explore Alternatives,  Identify Objectives, Constraints and Priorities | **OCE**: Assess Operational Concept | **None** | **None** | **None** |
| **Kevin Zhu**  Project Manager (PM),  Developer(D) | **None** | **None** | **None** | **D:** Develop Glue Code, Integrate Components, Fix Defects  **PM**: Plan and Manage Project | **D:** Develop Glue Code, Integrate Components, Fix Defects  **PM**: Plan and Manage Project | **D:** Transition The System  **PM**: Track Progress |

#### Skills

The following table indicates the roles of team members and the skills in 577a. (Exploration Phase, Valuation Phase, Foundation Phase)

Table 8: Current and required Skills in 577a

|  |  |
| --- | --- |
| **Skills** | |
| **Current** | **Required** |
| 1. Produce formal and technical documents | 1. PHP programing skill |
| 1. Negotiation/communication skills | 2. Database Management skill |
| 1. C/C++/JAVA/HTML/CSS programming skills | 3. User Interface design skill |
| 1. UML modeling skills | 4. Tracking defects and progress skill |
| 1. Tool using skills (Bugzilla, COCOMO II, COTIPMO, FUEL and so on) | 5. Coordinating resources skill |

Table 9: Development team’s Roles and Skills in 577a

|  |  |  |
| --- | --- | --- |
| **Team members** | **Role** | **Skills** |
| Chun-Ling Chen | Project Manager /  Prototyper | Current:   * Project Planning skill * Ability to organize and integrate resources * Client communication and negotiation skill * Project management skill * C/C++/HTML/CSS programming skill   Required:   * Presentation skill * Client communication and negotiation skill * PHP/JavaScript/Flash programming skill * Fuel/COCOMO II/COTIPMO tool using skill |
| Chun-Pei Su | Lifecycle Planner/ UML modeler | Current:   * UML Modeling skill * Database design skill * MySQL skill * JAVA/C programming skill * COCOMOII, COTIMO tool using skill   Required:   * PHP/C++/Photoshop programming skill * Presentation skill * Project management skill * Fuel tool using skill |
| Shao-yen Cheng | System Architect/ UML modeler | Current:   * UML Modeling skill * Providing specific system architecture process * Database design skill * PHP/C/C++/JAVA/JavaScript programming skill * MySQL skill * System analysis skill * Fuel tool using skill   Required:   * Flash/PHP programming skill * Presentation skill * Client communicating and negotiation skill * COCOMO II/COTIPMO tool using skill |
| Yuan-Chang Chang | Feasibility Analyst | Current:   * C/C++/JAVA programming skill * SQL server setting skill * ROI calculation skill   Required:   * Project Planning skill * Presentation skill * Client communicating and negotiation skill * Project management skill * Fuel/COCOMO II/COTIPMO tool using skill |
| Stewart Allen | Quality Focal Point / IIV&V/Requirements Engineer | Current:   * Balancing SCSs’ mutual satisfaction * C/C++/JAVA programming skills * Quality Evaluation skills * Prioritize requirements * Ability to track defects and changes   Required:   * PHP/JavaScript programming skill * Presentation skill * Client communication and negotiation skill * Fuel/COCOMO II/COTIPMO tool using skill |
| Yen-Kuo Kao | Operational Concept Engineer | Current:   * Ability to analyze the concept of the project * Analytical skills * Client communication and negotiation skills * PHP programming skills * Fuel tool using skill   Required:   * Presentation skill * Ability to organize and integrate resources * Client communication and negotiation skill * COCOMO II/COTIPMO tool using skill |

The following table indicates the roles of team members and the skills in 577b. (Development Phase and Operation phase.)

Table 10: Development team’s Roles and Skills in 577b

|  |  |  |
| --- | --- | --- |
| **Team members** | **Role** | **Skills** |
| Chun-Pei Su | Life Cycle Planner/Trainer/Document Maintainer | * PHP/JavaScript/Photoshop programming skills * Conflict management skills * Transit system skill * Fuel/COCOMO II/COTIPMO tool using skill |
| Kelvin Zhu | Project Manager / Developer | * UML Modeling * PHP programming skills * Ability to fix defects * Transit system skill * Fuel/COCOMO II/COTIPMO tool using skill * Communication skills |
| Shao-yen Cheng | UML modeler / Developer | * Communication skills * UML Modeling, syntax and rules * PHP programming skills * Bug tracking and removing skill * Fuel/COCOMO II/COTIPMO tool using skill |
| Stewart Allen | IIV&V / Tester | * Analytical skills * Communication skills * Analytical skills * Ability to transit the system * PHP programming skills * Fuel/COCOMO II/COTIPMO tool using skill |

1. Approach

#### Monitoring and Control

Life-cycle-plan provides team members a specific project plan to schedule the development progress. During development, the team can be effectively monitored and controlled by recording artifacts such as progress reports, weekly effort reports, and the project plan. However, the ideal approach for the team is communication with each other. Communication plays an important part in the project development that assists team members in easily tracking the defects and reporting development progress.

#### Closed Loop Feedback Control

In order to track and understand the progress of project anytime and anywhere, team members communicate with client and stakeholders by using Facebook, emails, and Dropbox. Also, the team and client have weekly meetings to track and report the project progress, which builds concrete trust with each other.

#### Reviews

All of the artifacts are reviewed and corrected by each team member. IIV&V will track a bug report reflecting a defect to the author. The review iterations help team member understand the details of each artifact and then have a discussion to resolve bugs. After delivering final artifacts, the TA will review the artifacts and provide suggestions and comments.

#### 4.2 Methods, Tools and Facilities

Table 11: Tools to be used in the project

|  |  |  |
| --- | --- | --- |
| **Tools** | **Usage** | **Provider** |
| WinBook | Identifying Win-Win Conditions and negotiating commitments to the client | USC |
| Trello | Record program model in the Win-win session | Trello |
| Join.me | Share screen to each team members and review the artifacts immediately | LogMeIn |
| Dropbox | Files save and share | Dropbox |
| Facebook | Communicate with team members and clients | Facebook |
| CSE Effort Reporting System | Individual effort records | USC |
| Email | One of the main tools of communication | USC/Google |
| Bugzilla | Report defect/errors/bugs | USC |
| Project Website | Documentation | USC |
| COCOMO II (version 2000.3) | Schedule, effort, feasibility estimation | USC |
| COTIPMO | Assess and estimate product accuracies and its timely delivery | USC |
| Fuel CMS | Providing a basic CMS framework to use to develop | Daylight Studio |
| Skype | Proving a conference platform for team/client meeting | Skype |
| Visual Paradigm | Create UML modeling diagrams | USC |
| Microsoft Project | Record weekly project plan | Microsoft Project |

#### Resources

Our team use single NDI to develop UDM project and the COTIPMO estimation is for 12 weeks in the spring semester. Assuming 10 weeks will be spent on implementing system.

Estimated CSCI577b

Effort: 1 team members at 12 hrs. /week for 10 weeks

Total estimated effort: 1.09 PM (166 hours)

Budget information: $2000

Project duration: 12 weeks

Component modules in your development project: Content Management System, Website Development

Programming language used: PHP, HTML, Javascript, MySQl

NDI Used: Fuel CMS, CodeIgniter

Table 12: Application count: Screens

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Screen** | **Number of views** | **Number of source of data tables** | **Complexity level** | **Rationale** |
| Home Page | 1 | 1 | Simple | Home page is basically and with login functionality. |
| Blog | 2 | 2 | Simple | Blog functionality is provided by COTS. |
| About us page | 1 | 1 | Simple | This page has simple text description to introduce who we are and what services we provide |
| Single source solution page | 1 | 1 | Simple | Static Page with information about 5P. |
| Contact information | 1 | 1 | Simple | This page provides contact information |
| Our work | 1 | 1 | Simple | This page has simple text description |
| Microsite | 2 | 1 | Medium | Microsite screen has |
| Administrator page | 3 | 3 | Medium | Administrator page provides basically edit functionalities |
| Service page | 3 | 3 | Medium | Service page contains business case review and microsite contents review |

Table 13: Application count: Report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Report** | **Number of sections** | **Number of source of data tables** | **Complexity level** | **Rationale** |
| User tracking | 2 | 2 | Simple | User tracking is provided by Fuel CMS |
| Marketing Analysis Pattern record | 4-6 | 3-5 | Medium | Record each customer corresponding to Marketing service like business analysis |
| Administrator recode | 2 | 2-3 | Simple | Administrator’s behavior will be shown and record |

Table 14: Application count: 3GL components

|  |  |
| --- | --- |
| **Component** | **Rationale** |
| Form generator | This component will involve some Javascript and potentially PHP to develop. |
| Microsite customization | This component will use PHP to develop. |

Table 15: Application Point Parameters

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Value** | **Rationale** |
| Developer's Experience and Capability | High | 75% developers have similar work experience in web site development. |
| ICASE Maturity and Capability | Nominal | Most of the development process is predictable and the developers are experienced. |

Figure 1: COTIPMO Tool result



**Figure 2: Iteration list and Project progress**

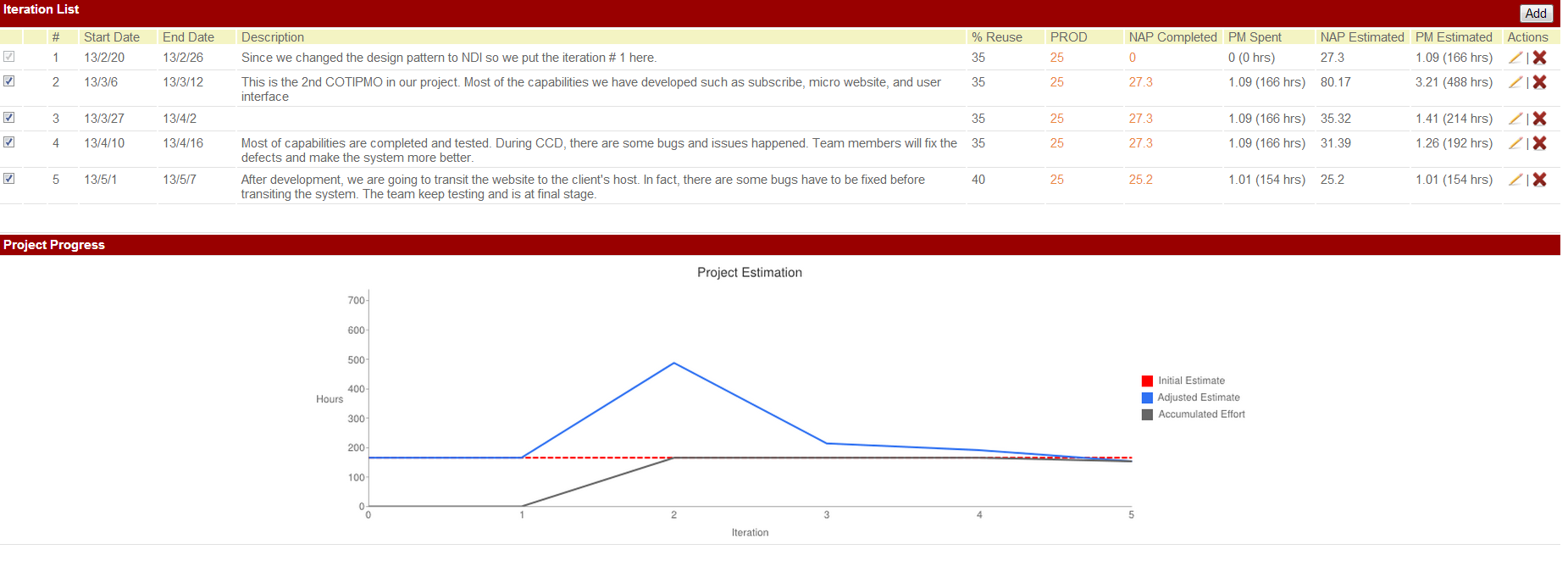
****

Figure 1 shows the COTIPMO tools result. Given one developer is working 12 hours per week for 12 weeks, the team has an effort of 1.09 PM to devote to this project. Using COTIPMO, we were able to

estimate the cost of the project to be 166 hours .

# 6. Iteration Plan

# There are 3 iterations in the Development phase of the United Direct Marketing project.

# - Construction iteration (1): 2/15/13-3/19/13

# - Construction iteration (2): 3/20/13- 4/13/13

# - Transition iteration: 4/14/13- 5/4/13

# In the first construction iteration, the capabilities follow the priority orders to implement, which are “must have” requirements. At the end of this iteration t our team will show the system to the client and collect the feedback to advance the system.

# In the second construction iteration, our team will implement the “should” and “could have” capabilities. After debugging and adjusting the system functionalities we will get ready for the main milestone Core Capability Drive-through.

# The transition iteration is preparing our system to transit and test onto client’s server. In addition, plan a training program to train the client’s employee and maintainer.

## 6.1 Plan

### 6.1.1 Capabilities to be implemented

Table 16: Construction iteration capabilities to be implemented

|  |  |  |  |
| --- | --- | --- | --- |
| Functionality ID | Description | Priority | Iteration |
| OC-1 Micro Website Generation | The system is capable of building a micro website so customers may see the proposal document and related marketing content from the webpage. | Must Have | 1 |
| OC-2 Related Projects Showcase module | The additional module is capable of posting related proposal content on the micro website. | Must Have | 1 |
| OC-3 Micro Website Administration | The backend system provides the ability to modify the webpage without help from a software developer. | Should Have | 2 |
| OC-4 Attaching documents | The module provides visitors the ability to search the contents on pdf and webpage. | Could Have | 2 |
| OC-5 Email Subscription | The module provides visitors the ability to subscribe to a periodic e-newsletter. | Should Have | 2 |
| OC-6 Encrypted Micro Website URL protection | The module censors the real URL, so only people with links from emails can access the site. Its main purpose is to prevent the proposal from being leaked out. | Must Have | 1 |

### 6.1.2 Capabilities to be tested

Table 17: Construction iteration capabilities to be tested

|  |  |  |  |
| --- | --- | --- | --- |
| Functionality ID | Description | Priority | Iteration |
| OC-1 Micro Website Generation | The system is capable of building micro websites so customers may see the proposal document and related marketing content from the webpage. | Must Have | 1 |
| OC-2 Related Projects Showcase module | The additional module is capable of posting related proposal content on the micro website. | Must Have | 1 |
| OC-3 Micro Website Administration | The backend system provides the ability to modify the webpage without help from a software developer. | Should Have | 2 |
| OC-4 Attaching documents | The module provides visitors the ability to search the contents on pdf and webpage. | Could Have | 2 |
| OC-5 Email Subscription | The module provides visitors the ability to subscribe to a periodic e-newsletter. | Should Have | 2 |
| OC-6 Encrypted Micro Website URL protection | The module censors the real URL, so only people with links from emails could access the site. Its main purpose is to prevent the proposal from being leaked out too easily. | Must Have | 1 |

Table 18: Non-functionality capabilities to be tested

|  |  |  |  |
| --- | --- | --- | --- |
| Functionality ID | Description | Priority | Iteration |
| LOS-1 Cross Browsers Support: | The system support different browser IE 8 and above, Firefox 4 and above, Chrome 16 and above | Must Have | 1 |

### 6.1.3 Capabilities not to be tested

The project team will deliver all the functionalities for the UDM project in 24 weeks. All the functions implemented will be tested.

### 6.1.4 CCD Preparation Plans

For the Core Capability drive-through, there are related stakeholders will attend:

* Our Client: Samta
* Development team (team 9)

The CCD preparation plan:

* We will invite our client and tell her our system development progress. The details of functionalities will briefly be introduced to related stakeholders.
* The client as system administrator will be asked manipulates and operates system and then gives the feedback to the development team.
* The team should have a risk mitigation plan and avoid any kind of errors occurs during CCD activity.
* The client will be asked as a customer (user) to input information or search information from the system.

## 6.2 Iteration Assessment

### 6.2.1 Capabilities Implemented, Tested, and Results

Table 19: Capabilities implemented, tested, and results

|  |  |  |  |
| --- | --- | --- | --- |
| Functionality ID | Description | % completed | %test |
| OC-1 Micro Website Generation | The system is capable of building micro websites so customers may see the proposal document and related marketing content from the webpage. | 90% | 80% |
| OC-2 Related Projects Showcase module | The additional module is capable of posting related proposal content on the micro website. | 90% | 80% |
| OC-3 Micro Website Administration | The backend system provides the ability to modify the webpage without help from a software developer. | 85% - a few modifications required | 90% |
| OC-4 Attaching documents | The module provides visitors the ability to search the contents on pdf and webpage. | 95% | 80% |
| OC-5 Email Subscription | The module provides visitors the ability to subscribe to a periodic e-newsletter. | 95% - needs styling | 95% |
| OC-6 Encrypted Micro Website URL protection | The module censors the real URL, so only people with links from emails could access the site. Its main purpose is to prevent the proposal from being leaked out too easily. | 95% | 95% - issues to address |

### 6.2.2 Core Capabilities Drive-Through Results

The team got the feedback directly from client during CCD. There were some bugs and minor issues that had to be addressed before transit to client’s server. In overall, client gave the system (team members) positive feedback and satisfied by the results. The below table shows the results of CCD and the comment was wrote by the client.

**Table 20: CCD results**

|  |  |  |
| --- | --- | --- |
| Functionality | Pass/Fail | Comment |
| 1. Micro website generated | Pass | This team understood what I wanted and asked really good questions to ensure that the bases were covered |
| 1. Related Module showcase | Pass | They created a scrolling showcase that looks great on the site, we just have to upload the rest of the jpg images and make sure they all work |
| 1. Micro Website administration | Pass | They made it very user friendly and intuitive |
| 1. Attaching documents | Pass | Very simple and intuitive |
| 1. Email Subscription | Pass | The functionality worked, some work is needed on the back-end functionality – see comment below |
| 1. Encrypted Micro Website URL protection | Pass | The unique URL is perfect for my needs. |
| 1. Cross Browsers Support | Pass | I need to do some additional testing, had a few bugs with i.e. that did not see in Chrome   * + - The team has fixed the bugs after CCD, TRR ARB. |

We collected the feedback and list the bugs/issues with priority level 1 to 5 to address:

**Table 21: Bugs/Issues report and priority of addressing**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bugs/Issues (5 is immediately and 1 is not important) | Priority of addressing | | | | |
| 1.The random string – I didn’t know what I was supposed to do with that field | 1 | 2 | 3 | 4 | 5 |
| 2.There were a couple links that didn’t connect but they seemed like minor things to fix | 1 | 2 | 3 | 4 | 5 |
| 3.I needed clarification on the max # of characters that can be included in some fields – just a matter of adding the info to the manual | 1 | 2 | 3 | 4 | 5 |
| 4.Email subscription – needs a little work to make the back-end database more user-friendly. | 1 | 2 | 3 | 4 | 5 |
| 5.Need to do some testing in different browsers | 1 | 2 | 3 | 4 | 5 |

Some of Issues such as #1 and #3 which belong User Manual clarification that should be easily to address. The team members and client have discussed the solution to solve bugs and related issues.

## 6.3 Adherence to Plan

The development team followed the schedule and successfully implemented the system. The system has already transited the website to client’s server.