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Promotion Provider_Project Plan_0.1	Promotion Provider_Project Plan_0.1 **Added** - Chapter 1 | Introduction - Chapter 2 | Software Process - Chapter 3 | Management Procedure - Chapter 4 | Quality Planning	Draft	10-06-2015	TS, NC, PS	TS, NC	NC
Promotion Provider_Project Plan_0.2	Promotion Provider_Project Plan_0.2 **Added** - Chapter 5 | Schedule and Milestones - Chapter 6 | Software Configuration - Chapter 7 | Repository	Draft	10-07-2015	TS, NC, PS	TS, NC	TS
Promotion Provider_Project Plan_1.0	Promotion Provider_Project Plan_1.0 **Updated** - Chapter 5 | Schedule and Milestones	Approved	13-07-2015	TS, NC, PS	TS, NC	TS

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July 27, 2015

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July 29, 2015

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Chapter 1 | Introduction

1.1 Project overview

1.1.1 Identification

***Project name*: Promotion Provider**

Project plan is the document for developed planning for project, scheduling for manage time in each task that can make project keep on track, risk management and quality plan to make project getting high quality and avoid failure.

1.1.2 Scope

We will establish an iPhone application, database, and server that use PHP to develop. Project will focus exclusively on the providing promotion and notification when user get closer than 20 meters. User can also get direction from current location to the restaurant or hotel destination, and they can also turn off the notification.

1.1.3 Document Overview

The purpose of this project Software Development Plan (SDP) documentation is to guide the project management during the development of the promotion provider project.

1.2 Work Product to be developed

1.2.1 Deliverables

No.	Deliverables/Release	Media	No. of Copies	Date
1.	Project Proposal	Document	1	10/06/2015
2.	**The progress report #1** Documentation - Project Plan - Software Requirement Specification (SRS) - Software Design Documentation (SDD) - Unit test Software System - User Interface Design - Feature Implementation • Feature #1 Managing shop owner: System provide	Document Software	3	29/07/2015

	managing function (add, update, delete) • Feature #2 Managing promotion: System provide managing function (add, edit and delete) • Feature #3 Changing password: All user type can change their password			
3.	**The progress report #2** <u>Documentation</u> - Software Test Plan Documentation - System test <u>Software System</u> - Feature Implementation • Feature #4 Show promotion information: System provide the promotion information • Feature #5 Notification: System will notify user application when they get closer than 20 meters • Feature #6 Turn off notification: User application can turn off notification	Document Software	3	23/09/2015
4.	**SE Show pro** <u>Documentation</u> - Unit test - System test - Poster A1 for presentation <u>Software System</u> - 30 seconds Introduction Clips - Feature Implementation • Feature #7 Searching: User application can search by place's name • Feature #8 Nearby: User application can see the promotion place in setting range • Feature #9 Single sign on: User application can sign in to system by using Facebook's account	Document Software	3 3	18/11/2015

	• Feature #10 Sharing promotion: User application can share any promotions to Facebook			
5.	**Final Progress** Documentation - The Full ISO 29110 Document Software System - 5 minutes Demo Program Clip	Document Software	3	28/12/2015

Table 2.1: Deliverable

1.2.2 Non-Deliverables

No.	Work Product	Media
1	Proposal Presentation	Power Point
2	The Progress Report #1	Power Point
3	The Progress Report #2	Power Point
4	The Final Progress Report	Power Point

Table 2.2: Non - Deliverable

1.3. Acronyms and Definition

1.3.1 Key Definition configuration

management — "A discipline applying technical and administrative direction and surveillance to: identify and document the functional and physical characteristics of configuration item, control change to those characteristics, record and report change processing implementation status, and verify compliance with specified requirements." [IEEE90]

design — "The period of time in the software life cycle during which the design for architecture, software components, interfaces, and data are created, documented, and verified to satisfy requirements. " [IEEE90]

implementation	“The period of time in the software life cycle during which a software product is created from documentation and debugged.” [IEEE90]
management	Designated corporate representative.
plan	“A detailed scheme, program, or method worked out beforehand for the accomplishment of an objective.” [IEEE90] Defined set of procedures and the required resources to implement a policy.
process	“A sequence of steps performed for given purpose.” [IEEE90]
program	Organization unit.
quality assurance	“(1) A planed and systematic pattern of all actions necessary to provide adequate confidence that an item or product conforms to established technical requirement.” [IEEE90] “(2) A set of activities designed to evaluate the process by which produces are developed or manufactured.” [IEEE90]
requirement	“(1) A condition or capability needed by a user to solve a problem or achieve an objective.” [IEEE90] “(2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document.” [IEEE90]
requirements	“The period of time in the software life cycle during which the requirements for a software product are define and documented.” [IEEE90]
software	“Computer programs, procedures, and associated documentation and data pertaining to the operation of the computer system.” [IEEE90]
software engineering	“The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software; that is, the application of engineering to software.” [IEEE90]
software quality assurance	See “quality assurance”
specification	“A document that specifies, in a complete, verifiable manner, the requirement, design, behavior, or other characteristics for

	determining whether these provisions have been satisfied." [IEEE90]
validation	"The process of evaluating a system or component during or at the end of the development process to determine whether it satisfies specified requirement. " [IEEE90]
verification	"(1) The process of evaluating a system or component to determine whether the products of given development activity that satisfy the conditions imposed at the start of that activity." "(2) Formal proof of program correctness." [IEEE90]
work product	Any tangible item that results from a project function, activity, or task. Examples of work products include customer requirement s, project plan, design documents, source and object code, user‟s manuals.

1.3.2 Key Acronyms and Abbreviation

AD	Activity Diagram
SDD	Software Design Document
SPMP	Software Project Management Plan
SRS	Software Requirement Specification
UC	Use case
UI	User Interface

1.4 Identification of Project Risks

No.	Risk Statement	Risk Solution
1	System Requirement May be change.	• Meeting and discuss and do a priority of changed requirement • Design system with changed requirements and related with the other requirements.
2	Team member maybe get accident and can't develop the project.	• Assign a work to left team member who doesn't get accident.

3	Computer lost or broken	• Back up project every time.
4	Work products are not submitted on time.	• Establish the project plan. • Develop project follow the project plan.

Table 2.3: Identification of Project Risks

1.5 Estimated Duration of task

No.	Task	Estimated Duration (Days)
1	- Proposal	30
2	- Software requirement and Software design	30
3	- Server (Web)	30
4	- Application (Mobile)	40

Table 2.4:Estimated Duration of Task

1.6 Project Constraints

1.6.1 Resource constraint

- Software developing must follow by ISO29110 Standard.
- There are only two people for Promotion Provider project development.

1.6.2 Environment constraint

- Objective –X-code tool and iPhone technology are new.
- Code igniter framework from develop web application are new framework.

Chapter 2 | Software Process

2.1 Monitoring and Controlling Mechanisms

2.1.1 Software Development Model

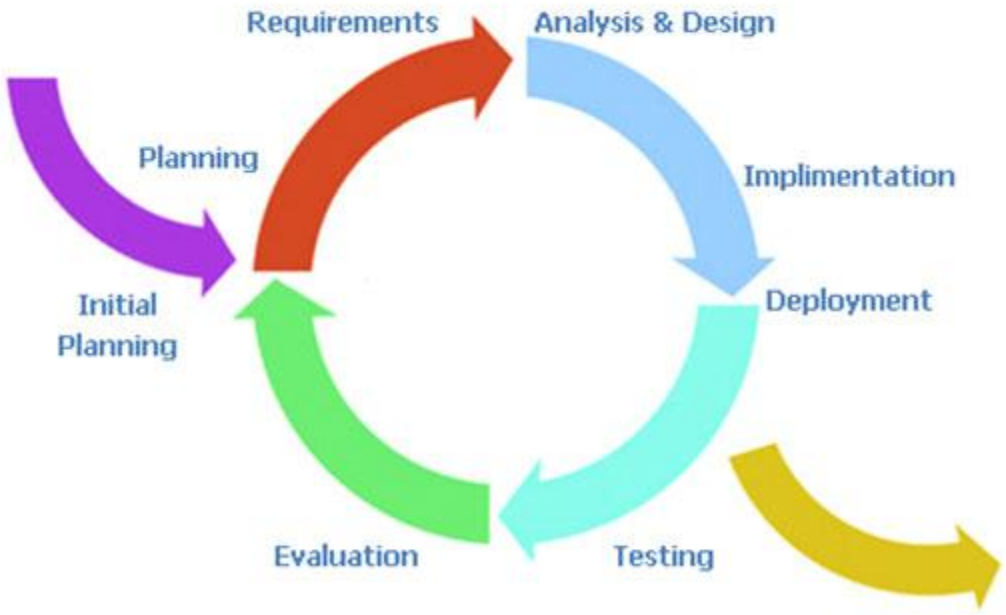

Figure 2.1 Software Development Model

Iterative model is a one of Software Development Model which evolves from waterfall model. By change process flow from step to step into iterative step. When the process flows into iterative, the process will start from the first step then go to the next step till the last. After that, the process will back to the first step and start again. The iteration will be repeat until all processes planned are complete then out from the loop and go to next main phase. The advantages of this model are support dividing and flexible. It can divide the system into subsystem or feature and then iterative create each feature. With this, chance of project failure will be reduced because it can detect problem early before integrate into the system.

Proposal phase: This phase is about creating a proposal for Junior fighting. The proposal contains about project introduction, technologies and tool involved, quality standard and project plan.

Document plan phase: This phase is about document for planning and designs the overall system from requirement given by the user. These documents are Project Management Plan, Software Requirement Specification and Software Design Document.

Iterative all features: This phase is about separate system into many features and then iterative create all feature from the first feature till the final feature. For this phase, it will be divided into 4 phases. There are;

- **Plan:** Planning the method for creating and test each feature.
- **Implement:** Implement and coding each feature.
- **Test:** Test and debug each feature.
- **Review:** Review and maintain each feature to meet the feature plan.

System test phase: This phase will integrate all features together into one system and then create test document from system testing.

Deploy phase: This phase is about deploy the whole system to server and use as a regular mobile application.

2.1.2 Status Report

No.	Progress report	Software Item	Date
1.	Project Proposal	Proposal	10/06/2015
2.	The progress report #1	Project Plan & Quality Plan Software Requirement specification 1.0 Software Design Document 1.0 Software Source code 1.0 Test Plan 1.0 Test Record 1.0 Traceability record 1.0	29/07/2015
3.	The progress report #2	Software Requirement specification 2.0 Software Design Document 2.0 Software Source code 2.0 Test Plan 2.0 Test Record 2.0 Traceability record 2.0	23/09/2015
4.	SE Show pro	Unit test System test Poster A1 for presentation 30 seconds Introduction Clip	18/11/2015

5.	Final Progress -	Software Requirement specification (complete) Software Design Document (complete) Software Source code (complete) Test Plan (complete) Test Record (complete) Traceability record (complete)	28/12/2015

Table 2.5: Status Report

2.1.3 Burn down chart

- Project status report

2.2 Change management

Change control procedure

1. Analyze the reason for the change.
2. Send change form to project advisor.

   2.1 If accept: make a change in project from change request form.

   2.2 If reject: Continue in the project and find the way to solve a problem.
3. Analyze the result from changing and modify the document or system to match with change.

2.3 Development Tools

- PhpStrom Version 7.1
- XAMPP Version 1.8.2
- Google chrome
- MySQL Workbence

2.4 Software Resource

- Promotion provider is developed on iOS mobile platform
  - Firmware
    - iOS 7

2.4 Hardware and Material Resource

- Computer
  - MacBook Pro (15-inch, Late 2011)
  - Processor: 2.2 GHz Intel Core i7
  - Memory: 8 GB 1600 MHz DDR3
  - Graphics: Intel HD Graphics 3000 512 MB
  - Operating System (OS): OS X Yosemite version 10.10.4

- Smartphone
  - iPhone 4
  - iPhone 4s
  - iPhone 5s
  - iPod touch gen 5

- Internet
  - Internet access speeds more than 250 Kbps

Chapter 3 | Management Procedures

3.1 Project Team Structure

No.	Participants	Role	Responsibility
1	Tanawat Sitthitan	Developer, Tester	• Develop software • Test software • Test Unit test • Review Document and software Manage change
2	Nattakit Chaiwongsri	Tester, Reviewer	• Create Documentation ▪ Proposal ▪ Project plan ▪ Quality Plan ▪ SRS ▪ SDD ▪ Test Plan ▪ Test Record ▪ Traceability Record • Review Document and software
3	Mr.Phudinan Singkhamfu	Advisor, Reviewer	• Review document • Approved document • Approved change request

Table 2.6: Project Team Structure

3.2 Monitoring and Controlling Mechanisms

No.	Participants	Responsibility
1	Tanawat Sitthitan	Developer, SA
2	Nattakit Chaiwongsri	Document, SA
3	Mr.Phudinan Singkhamfu	Advisor, SA

Table 2.7: Monitoring and Controlling Mechanisms

Chapter 4 | Quality Planning

4.1 Reviews/Responsibility

Stage Exit Review			
No.	**Stage**	**Review Item**	**Responsibility**
1	Requirement	- SRS	Tanawat, Nattakit
2	Design	- Use case diagram - Activity diagram - Sequence diagram	Tanawat, Nattakit
3	Implementation	- Code	Tanawat, Nattakit
4	Verification	- Unit test - Test case - Test plan	Tanawat, Nattakit
5	Maintenance	- Maintenance report	Tanawat, Nattakit

Table 2.8: Reviews/Responsibility

4.2 Testing

Refer: Test Plan Documentation

4.3 Software Development Standard

ISO 29110 for Very Small Entity (VSE)

ISO 29110 is the Software Life Cycle Profiles and Guidelines for Very Small Entities (VSEs) standards and technical reports are targeted at Very Small Entities (VSEs). A Very Small Entity (VSE) is an enterprise, organization, department or project having up to 25 people. ISO 29110 concerns on project management process and software implementation process.

4.3.1 Project Management (PM) process

- **Purpose**

The purpose of the Project Management process is to establish and carry out in a systematic way the tasks of the software implementation project, which allows complying with the project's objectives in the expected quality, time and costs.

- **Objectives**
  - **PM.O1.** The *Project Plan* for the execution of the project is developed according to the *Statement of Work* and validated with the Customer. The tasks and resources necessary to complete the work are sized and estimated

- **PM.O1. Tasks in this project:**

1. Create the Project Plan related with the Project Proposal.

- **PM.O2.** Progress of the project is monitored against the *Project Plan* and recorded in the *Progress Status Record.* Corrections to remediate problems and deviations from the plan are taken when project targets are not achieved. . Appropriate treatment is taken to correct or avoid the impact of risk. Closure of the project is performed to get the Customer acceptance documented in the *Acceptance Record*
  - **PM.O2. Tasks in this project:**

1. Record the project status in Project Status Record for each progress.
2. Establish the Acceptance Record before submitting final progress.

- **PM.O3.** The *Change Requests* are addressed through their reception and analysis. Changes to software requirements are evaluated for cost, schedule and technical impact.
  - **PM.O3. Tasks in this project:**

1. Analyzing the change.
2. Setting the change request form.
3. Approving the change request by project advisor.
4. Change the project follow by approved change request.

- **PM.O4.** Review meetings with the Work Team and the Customer are held. Agreements are registered and tracked.
  - **PM.O4. Tasks in this project:**

1. Meeting with team members and project advisor.
2. Evaluate meeting results.

- **PM.O5.***Risks* are identified as they develop and during the conduct of the project.
  - **PM.O5. Tasks in this project:**

1. Identify the risks.
2. Analyse the risks.
3. Plan for managing the risksin the Project Plan.

- **PM.O6.**A *Software Version Control Strategy* is developed. Items of *Software Configuration* are identified, defined and baselined. Modifications and releases of the items are controlled and made available to the Customer and Work Team including the storage, handling and delivery of the items.
  - **PM.O6. Tasks in this project:**

1. Identify SCI.
2. Create SCI table.
3. Record the change of each SCI in the SCI table.

- **PM.O7.** Software Quality Assurance is performed to provide assurance that work products and processes comply with the *Project Plan* and *Requirements Specification*.
    - **PM.O7. Tasks in this project:**

1. Create tasks follow ISO29110 for VSE to the Project Plan and Requirements Specification.

4.3.2 Software Implementation (SI) process

- **Purpose**

The purpose of the Software Implementation process is the systematic performance of the analysis, design, construction, integration and tests activities for new or modified software products according to the specified requirements.

- **Objectives**
    - **SI.O1.** Tasks of the activities are performed through the accomplishment of the current *Project Plan*.
        - **SI.O1. Tasks in this project:**

1. Develop software comply with the current Project Plan.

    - **SI.O2.** Software requirements are defined, analysed for correctness and testability, approved by the Customer, baselined and communicated.
        - **SI.O2. Tasks in this project:**

1. Analyse the requirements.
2. Accomplish the Software Requirements Specification.

    - **SI.O3.** Software architectural and detailed design is developed and baselined. It describes the software items and internal and external interfaces of them. Consistency and traceability to software requirements are established.
        - **SI.O3. Tasks in this project:**

1. Create Software Design Document that covers all of Software Requirements.
2. Create Traceability Record to trace the items in Software Design Document with the software requirements.

    - **SI.O4.** Software components defined by the design are produced. Unit test are defined and performed to verify the consistency with requirements and the design. Traceability to the requirements and design are established.
        - **SI.O4. Tasks in this project:**

1. Create Unit test that is comply with requirements and design after software components are produced.

1. Perform the unit test.
2. Traceability record is created for tracing Unit test with the requirements and design

- **SI.O5.***Software* is produced performing integration of software components and verified using *Test Cases and Test Procedures*. Results are recorded at the *Test Report*. Defects are corrected and consistency and traceability to *Software Design* are established.
    - **SI.O5. Tasks in this project:**

1. Design Test Cases from Software Design.
2. Test the software components.
3. Record the Test Cases results at the Test Report.
4. Create traceability record.

- **SI.O6.** A *Software Configuration*, that meets the *Requirements Specification* as agreed to with the Customer, which includes user, operation and maintenance documentations is integrated, baselined and stored at the *Project Repository*. Needs for changes to the *Software Configuration* are detected and related *Change Requests* are initiated.
    - **SI.O6. Tasks in this project:**

1. Analyze the change.
2. Create the change request form.
3. Approve the change request by project advisor and upload in our repository that is Dropbox.com.
4. Change the project complies with approved change request.

- **SI.O7.** Verification and Validation tasks of all required work products are performed using the defined criteria to achieve consistency among output and input products in each activity. Defects are identified, and corrected; records are stored in the *Verification/Validation Results*.
    - **SI.O7. Tasks in this project:**

1. All works are traceable and have tested.

Chapter 5| Schedule and Milestones

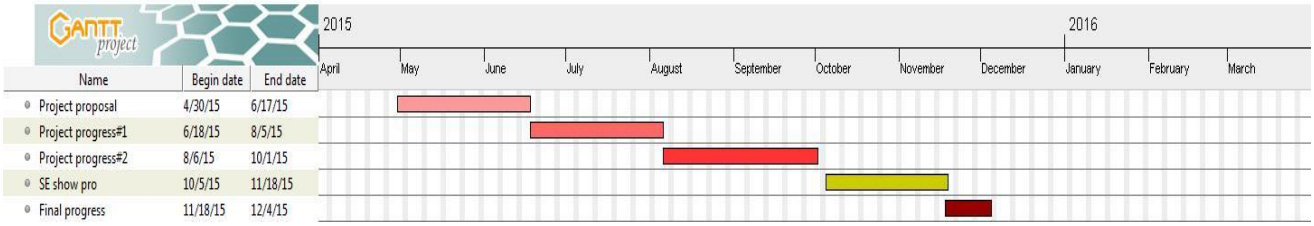

Figure 2.2: Promotion Provider Schedule and Milestone

- Project Proposal Presentation
- Progress Report I
- Progress Report II
- Final Project Presentation.

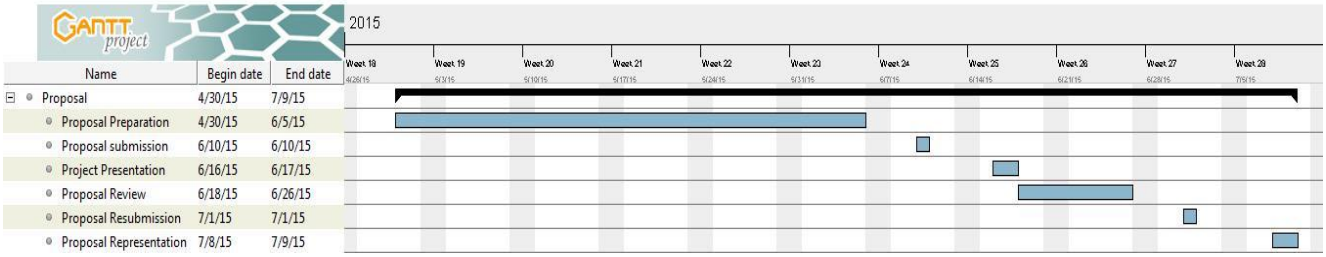

Figure 2.3: Proposal Milestone

- Proposal Preparation
- Proposal Submission
- Proposal Presentation
- Proposal Reviewing
- Proposal Resubmission
- Proposal Representation

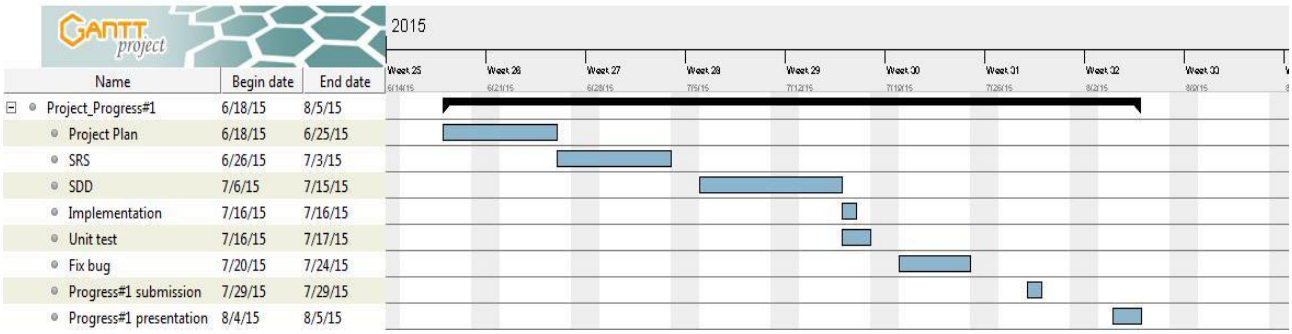

Figure 2.4: Progress #1 Milestone

- Feature #1 Managing shop owner: System provide managing function(add, update, delete)
- Feature #2 Managing promotion: System provide managing function(add and delete)
- Feature #3 Changing password: All user type can change their password
- Project Plan
- Software Requirement Specification(SRS)
- User Interface Design
- Feature Implementation
- Unit Test
- Fix bugs
- Progress Report I Submission
- Progress Report I Presentation

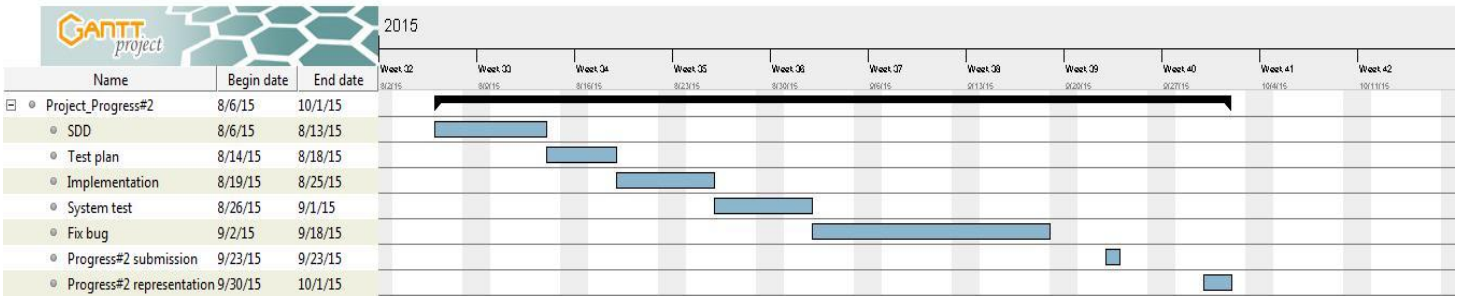

Figure 2.5: Progress #2 Milestone

- Feature #4 Show promotion information: System provide the promotion information
- Feature #5 Notification: System will notify user application when they get closer than 20 meters

- Feature #6 Turn off notification: User application can turn off notification
- Software Design Document for Progress II
- Software Test Plan for Progress II
- Feature Implementation
- System Test
- Fix Bugs
- Progress Report II Submission
- Progress Roport II Presentation

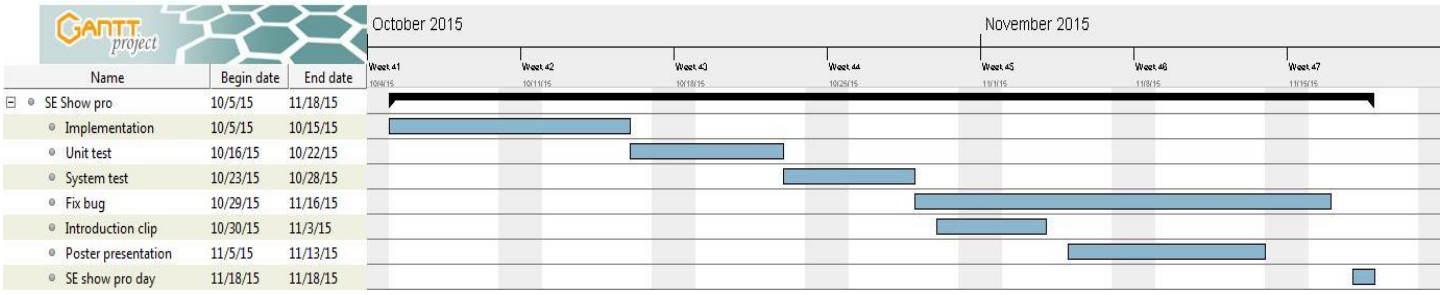

Figure 2.6: SE Show Pro Milestone

- Feature# 7 Searching: User application can search by place's name
- Feature# 8 Nearby: User application can see the promotion place in setting range
- Feature# 9 Single sign on: User application can sign in to system by using Facebook's account
- Feature# 10 Sharing promotion: User application can share any promotions to Facebook
- Unit test
- System test
- Fix bugs
- 30 seconds Introduction Clips
- Poster A1 For Presentation
- SE Show Pro

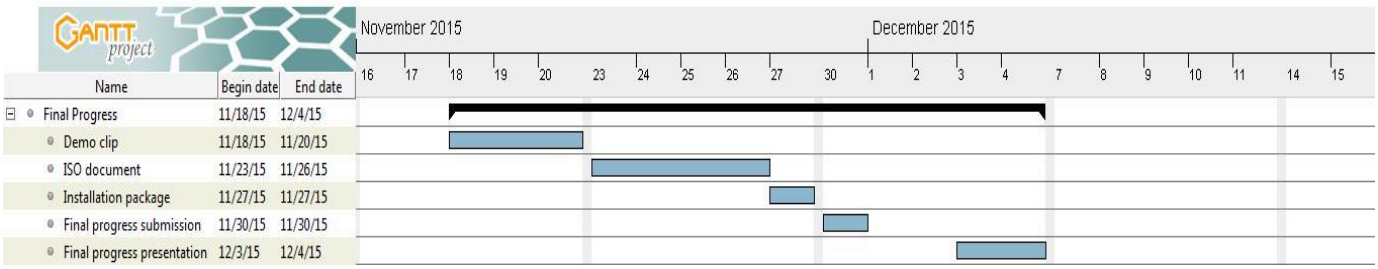

Figure 2.7: Final Progress Milestone

- 5 minutes Demo Program Clip
- The Full ISO 29110 Document
- Installation Package
- Final Report Submission
- Final Report Presentation

Chapter 6 | Software Configuration Management

Software Configuration Management is a set of activities designed to control change by identifying the work products that are likely to change, establishing relationships among them, defining mechanisms for managing different versions of these work products, controlling the changes imposed, and auditing and reporting on the changes made. In other words, SCM is a methodology to control and manage a software development project.

6.1 Filename Format

We control all document files in our project by use like:
[Project Name]_[File Name]_[Version]. [File type]

Project Name: This part will be full-name of project (Promotion Provider)
File Name: This part will depend on substance of that file:

- Proposal
- Project Plan & Quality Plan
- SRS(Software Requirement Specification)
- SDD(Software Design Document)
- Code
- Test Plan
- Test Record
- Traceability Record

Version: This part is version of file. Version number.
File type: This part is type of file.

6.2 Change Management

Change management manages all of the changes in the project during development process. All of the change requests will be record into the change request document.

We have the strategy for manage the changes by following these steps:

1. Analyzing the change.
2. Setting the change request form.
3. Approving the change request by project advisor.
4. Change the project follow by approved change request.

6.3 Software Configuration Item Table

No.	Item	File name	File Type	Owner	Path	Baseline version
1	Project Proposal	Promotion provider_ProjectProposal_1.0	.docx	Tanawat, Nattakit	www.dropbox.com/Promotion Provider 2015/Proposal/Promotion provider_1.0	1.0
2	Project Management Plan	Promotion provider_ProjectPlan1	.docx	Tanawat, Nattakit	www.dropbox.com/Promotion Provider 2015/Project Plan/Promotion provider_ProjectPlan_1.0	1.0, 2.0, 3.0
3	Software Requirement Specification	Promotion provider_SRS_1.0	.docx	Tanawat, Nattakit	www.dropbox.com/Promotion Provider 2015/Software Requirement/Promotion provider_SRS_1.0	1.0, 2.0, 3.0
4	Software Design Document	Promotion provider_SDD_1.0	.docx	Tanawat, Nattakit	www.dropbox.com/Promotion Provider 2015/Software Design/Promotion provider_SDD_1.0	1.0, 2.0, 3.0
5	Test Plan	Promotion provider_TestPlan_1.0	.docx	Tanawat, Nattakit	www.dropbox.com/Promotion Provider 2015/Test Plan/Promotion provider_TestPlan_1.0	1.0, 2.0, 3.0
6	Test Record	Promotion provider_TestRecord_1.0	.docx	Tanawat, Nattakit	www.dropbox.com/Promotion Provider 2015/Test Record/Promotion provider_TestRecord_1.0	1.0,2.0,3.0
7	Traceability Record	Promotion provider_TraceRec_1.0	.docx	Tanawat, Nattakit	www.dropbox.com/Promotion Provider 2015/Traceability Record/Promotion provider_TraceRec_1.0	1.0, 2.0, 3.0

Table 2.9: Software Configuration Item

Chapter 7 | Repository

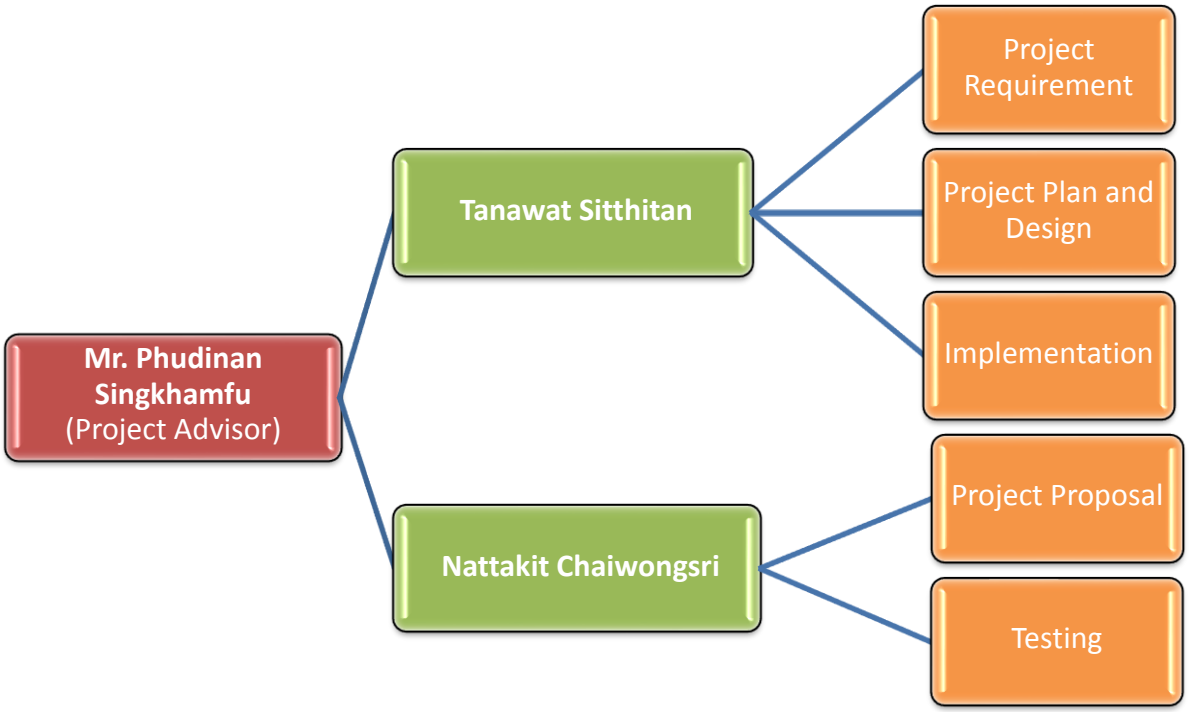

Figure 2.8: Repository