**Test Plan**

**Team Collaboration System For Mobility Water Monitoring**

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# Chapter 5-1 | Introduction

## 1.1 Objectives

The objectives of the test plan of Team collaboration system for mobility water monitoring is to establish test plan of the unit testing and system testing and make sure that the bugs or the defects are discovered and fixed. The unit testing covers all of implemented methods in Team collaboration system for mobility water monitoring. The system testing covers the user requirements.

## 1.2 Scope

This test plan describes the unit testing activities to find out the defects in the system and describes the system testing activities for testing a completely integrated system to verify that it cover all of user’s requirements.

## 1.3Acronyms and Definitions

### Acronyms

TCS Team collaboration system for mobility water monitoring

SRS Software Requirement Specification

URS User Requirement Specification

SDD Software Design Document

UI User Interface

UTC = Unit Test Case

STC = System Test Case

SW = Siraprapa Wattanakul

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### Definitions

Feature Transformation of input parameters to output parameters based on a specified algorithm. It describes the functionality of a produce in the language of the product. Used for requirements analysis, design, coding, testing or maintenance. [IEEE90]

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

IEEE Institute for Electrical and Electronics Engineers. Biggest global interest group for engineers of different branches and for computer scientists. [IEEE90]

Requirement (1) A condition or capability needed by a user to solve a problem or achieve an objective. (2) A condition or capability that must be met or processed by system or system component to satisfy a contract, standard, specification, or other formally imposed document. (3) A documented representation of a condition or capability as in definition (1) or (2). [IEEE90]

Specification Precise description of an activity or work product which serves as basis or input for further activities or work product. A specification can comprise requirements to a product and how they will be solved. Different parts of a specification (e.g. what is to be done, how it will be done) must not be mixed. [IEEE90]

White box testing Testing process that focus on internal structure. The tester should know the code inside the program and test it through the code and determines the appropriate outputs.

Black box testing Process, device or system that focus on input, output and transfer characteristics without knowledge about it internal structure.

Unit Testing A level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the performs as designed.

System testing A level of the software testing process where a complete, integrated system/software is tested. The purpose of this test is to evaluate the system's compliance with the specified requirements.

# Chapter 5-2 | Test Plan and Test Procedure

## 2.1 Test Objective

The objectives of testing Emergency Information on Mobile project are:

1. All bugs or defects are detected.
2. Those bugs or defects are fixed.
3. Functions and user interface covered the requirements.
4. All functions and features that are define in progress 1, must be follow in project plan.

## 2.2 Scope of testing

Team collaboration system for mobility water monitoring will test by white-box and black-box testing techniques that are unit testing and system testing and record the test results in the test record.

## 2.3 Test Duration

|  |  |
| --- | --- |
| **Progress** | **Date and Duration** |
| Progress Report I | **Perform Date:** 5th February 2015 – 15th February 2015 (Unit and System Test) **Duration:** 10 days |
| Progress Report II | **Perform Date:** 15th April 2014 –  1st May 2014 (Unit and System Test) **Duration:** 10 days |
| Progress Report III | **Perform Date:** 29th April 2014 –  15th May 2014 (Unit and System Test) **Duration:** 10 days |

## 2.4 Test Responsibility

|  |  |
| --- | --- |
| **Item** | **Responsibility** |
| Unit test of web application | WT, PC |
| Unit test of mobile application | WT, PC |
| Record unit test of web application | WT, PC |
| Record unit test of mobile application | WT, PC |
| System test of web application | WT, PC |
| System test of mobile application | WT, PC |
| Record system test of web application | WT, PC |
| Record system test of android application | WT, PC |

## 2.5 Test Strategy

Team collaboration system for mobility water monitoring test strategy will be follow by:

1. Design test case for each feature.
2. Prepare test data for each feature.
3. Determine expected results.
4. Perform testing on individual features.
5. Result of testing will be record.
6. Record the actual testing result..

## 2.6 Result of Testing

In the test record the test result will separate into two parts, which are:

1. Actual output: The actual outputs that are performed by each test case.
2. Pass/Fail criteria:
   1. Pass: The result of actual is same like expected result.
   2. Fail: the result of actual result is not same like expected result.

## 2.7 Test Environment

### 2.7.1 Hardware

* **Computers**
  + HP Probook 4530s
    - Processor: Intel® Core™ i5-2430M CPU @ 2.40GHz 2.40GHz
    - RAM: 8.00 GB
    - Operating System: Windows 7 Ultimate
  + Asus K550J
    - Processor: Intel® Core™ i7-2410M CPU @ 3.5GHz 2.30GHz
    - RAM: 4.00 GB
    - Operating System: Windows 7 Ultimate
* **Mobile phones:** Android Operating System
  + Samsung Galaxy Ace Plus S7500
    - CPU: Quad-core 1.0 GHz Cortex-A7
    - RAM: 1.0 GB
    - Operating System: Android 2.3 Gingerbread

### 2.7.2 Software

* Eclipse
* Google chrome
* Android ADT