**Volunteer Management System**

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| --- | --- |
| ***Project Plan*** |  |
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|  |  |
| **MTECH project Team SE18- 08S** |  |
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| Volunteer Management System  Project Plan |

Version: 0.1a

Prepared by: Dio Phung – Project Manager

Date: 23rd March 2011

Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Date: 23rd March 2011

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Approved by: Dio Phung - Project Manager

Date: 23rd March 2011

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# Document History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Author | Reviewed by | Date |
| 0.1a | Dio Phung | Team SE18-08S | 23rd March 2011 |
|  |  |  |  |

# Distribution List

|  |  |  |
| --- | --- | --- |
| Name | Department | Organization |
| Team SE18-08S |  |  |
|  |  |  |
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**Table of Contents**

# INTRODUCTION.

The target customer is poverty elimination NGO. It has grown tremendously over the years and is attracting more and more volunteers both domestically and internationally. As it grows, there is an increasing need to coordinate and manage its volunteers, especially international volunteers, as they require more administrative and logistic efforts. The current ways of manually handling documents and volunteers requires a lot of works and limiting the organization efficiency.

From the situational analysis and problems identified, the team proposed an integrated system with the aim of addressing the problems of volunteer communication, documentation, recruitment and retention.

The project serves as the required MTECH project for students in ISS to complete the Master of Technology (Software Engineering) course.

## Purpose.

The purpose of this document is to provide a Project Plan – which define the generic strategy for successfully deliver all required deliverables for MTECH project on schedule.

## Audience.

The intended readers of this Project plan are the project team. The document will:

* Specify each team member’s role and responsibility
* Provide the team with a plan for the activities that they are to perform
* Specify the deliverables the team will produce
* Indicate the required efforts for each tasks against the project timeline

## Document structure.

The Project plan consists of these major parts:

* Work Breakdown Structure
* Project Effort Estimation
* Project Schedule and timeline
* Project Deliverables
* Project structure and staffing

## References.

To fully understand the background to this project, the reader should also refer to the project proposal (reference VMS/PROP/).

# PROJECT STRUCTURE AND STAFFING.

Below is the project structure and staffing – each resource will be assigned to a specific role. During the project timeline, they are expected to perform as defined in the role description. However, resource allocation can be modified and additional tasks may be assigned to each resource depends on the project needs.

## Project Manager: Phung Kim Cuong, Dio

Dio will be responsible for managing the project, defining project plan, allocating resources, reviewing progress against the plan and instituting appropriate action.

In addition, he will provide advice to the Project Lead on the structure and content of the deliverable project documents and will be responsible for the production of the required planning documents.

He will be in charge of producing Project Plan and general project management activities.

## Quality Manager: Liu Peishan

She will be responsible for the quality of all project deliverables.

She will be in charge of producing Quality Management plan and auditing all project deliverables to ensure they are conform to the Quality Management plan.

## Technical Lead: Zaw Htet

He will be responsible for undertaking the majority of the work described in Section 3. The tasks to be undertaken by him are defined as below:

* Prototyping development;
* Production of System Specification;
* Database define and set-up;
* Production of Algorithm Specification;
* Software coding;
* Testing and installation;
* User training and user trial support;
* Production of user's manual and programmer's manual;

## Team Lead: Feng Yan

Feng Yan will be the lead in development phase; she will work with Zaw for all development activities and in charge of developing major components for the VMS.

## Business Analyst: Hnin Nu Aye (Hazel)

Hazel will work together with Thida in User Requirement gathering and support Thida in producing URS. She will also be part of the development team and will support Zaw and Feng Yan in VMS development.

## Business Analyst Lead: Thida Khin Myo Thaung

Thida will be in charge of leading the User Requirements gathering and User Requirement Specification activities. She will be in charge of producing the URS.

She will also be part of the development team and will support Zaw and Feng Yan during VMS development phase.

## Test Lead: Jiang Jifa

Jifa will be in charge of leading the testing team – he will also be part of the development team and in charge of producing the Prototype for VMS.

# PROJECT APPROACH.

The VMS project will follow Waterfall SDLC model through 7 phases starting from Project Planning to Final Project Report.

In each phase, there will be a number of activities to be performed and required deliverables to be produced. Each phase will also involve different resources depends on the requirement in that phase – the details will be presented in Work Breakdown Structure (WBS) in section 4.

Project Manager and Quality Manager will be involved in all phases of the project for overseeing the activities and qualities of the deliverables.

Each phase in the VMS project will be discussed in details as below.

## Project Planning.

To initiate the project, the team will:

* Produce a formal Project Plan (this document) to define the strategy for the project team to successfully produce all required deliverables.
* Produce a Quality Assurance Plan beside the Project Plan – this document will provide guiding principle for the team to ensure they will deliver quality product.
* Set up a project filing system to store all management and technical documents of the project.

The Project Manager, Quality Manager will be involved in this phase. At the end of this activity, they will also prepare first Project Presentation and Quality Audit check.

## Requirements Analysis.

Due to the nature of the project, one member of the project team, who will act as the putative User Manager in the requirement analysis phase, has replaced the actual customer in the proposal.

The Business Analyst team (consist of one Business Analyst Lead and one Business Analyst) will complete this phase by:

* + - Working with the putative user to identify the user requirements;
    - Producing a user requirements specification; and
    - Conducting additional research and verification with the putative user to resolve any remaining requirements issues.

The Business Analyst Team and putative User Manager will be involved in this phase.

## Analysis Modeling.

### Analysis:

The next phase will be analysis and design. In this phase, the team will:

* + - Produce Use Case Realization Report (Analysis)
    - Produce high level Design Specifications.
    - Produce Transition Strategy from Analysis to Design

The Team Lead, Quality Manager, and development lead will be involved in this phase. At the end of this activity, Project Manager and Quality Manager will also prepare second Project Presentation report and Quality Audit check.

### Prototyping.

Based on the high-level user requirements specification, a series of prototypes (approximately 3 rounds) will be produced by using HTML pages and wireframe.

Each prototype will be demonstrated to the putative UM (who was appointed by the team) to determine the acceptability of screen layouts, report formats and methods of operation (menus, function keys, etc).

Because of each prototype demonstration, changes will be agreed to be included in the next prototype. Hence, each prototype builds on the functionality of the previous until it is agreed with the putative UM that the last prototype represents the full detailed requirements for the software to be developed. These requirements will be documented in analysis and design specifications.

The development team will be involved and responsible to produce the prototype of VMS.

## Design Modeling.

After Analysis and Prototyping phase is completed, the team will proceed to produce detailed design specifications through a series of activities:

* + - Defining detailed objects specifications
    - Defining detailed sequence diagrams

The Team Lead and Development Lead will be involved in this phase.

## Software Implementation.

When the final prototype has been produced and requirements for the software have been agreed, the software will be implemented by:

* + - Produce detailed level design specification – this document will include all sequence diagrams and object specifications.
    - producing user manual
    - producing programmer documentation / guide;
    - specifying the algorithms and other detailed processes to be implemented;
    - develop the system;
    - undertaking unit test;

The development team is the owner of this phase.

## System Integration Testing

When the development and unit testing of the system are completed, the test team will start the testing phase by:

* + - defining test scripts and test data
    - preparing testing environment
    - performing system test;
    - producing test log;

Project Manager, Quality Manager and the test team will be the owner of this phase. Notes: There will be no deployment activities as agreed with the putative User Manager.

## User Acceptance Testing

After the System Integration Test is done and verified as passed, the team will proceed to perform UAT by:

* Preparing test scripts and test data for UAT
* Preparing the UAT environment
* Performing UAT and record the test results
* Performing corrective actions needed to pass UAT

The Project Manager, Putative User Manager and the test team will be involved in this phase. After the UAT is completed successful, the team will document the test results and the system is considered accepted by users. Due to the nature of the project, there will not be actual user sign-off.

## Project Report and Closure

After the development and testing of the system is completed, the team will finish the project by:

* + - Produce the system user guide
    - Produce End of Project report
    - Prepare third Project Presentation and Audit Check.

# WORK BREAKDOWN STRUCTURE (WBS)

The WBS will specify the list of tasks that need to be performed to successfully complete the VMS project. Together with the list of tasks, WBS also identifies the resources assigned to each tasks and the required deliverables of that activity.

The WBS is done by following these steps:

* + Identifying all project deliverables
  + Forming the needed tasks to deliver these items, arranging the tasks with respect to RUP methodology and Waterfall SDLC
  + Assigning the corresponding resources based on the required deliverables,

**WBS Legends**

|  |  |
| --- | --- |
| **Roles** | **Resources** |
| Project Manager - PM  Quality Manager - QM  Team Lead - TL  Development Lead - DL  Business Analyst Lead - BAL  Business Analyst - BA  Test Lead - TSL  Developer - DEV  Putative User Manager - UM | Dio  Peishan  Zaw  Feng Yan  Thida  Hazel  Jifa  All members  Dio, Peishan |

|  |  |
| --- | --- |
| **Deliverables** | **Abbreviation** |
| Design Specifications  Functional Specifications  Project Management Plan  Project Report  Prototyping Study Report  Quality Plan  Test Documentation  Use Case Model Survey  Use Case Realization Report  User Requirement Specifications | DS  FS  PMP  PR  PRS  QAP  TD  UCMS  UCRR  URS |

**WBS details**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Activity | Resources | Deliverables |
|  | **Project Planning** |  |  |
|  | Produce Project Plan | PM | PMP |
|  | Review Project Plan | PM, QM | PMP (final) |
|  | Produce Quality Plan | QM | QAP |
|  | Review Quality Plans | PM, QM | QAP (final) |
|  | Prepare first Audit & Presentation | QM, PM, BL | First PR |
|  | **Requirement Analysis** |  |  |
|  | Research Requirements | PM, BA,BAL |  |
|  | Produce User Requirements Specifications | BA, BAL | URS |
|  | Review User Requirement Specifications | PM, QM, BAL | URS (final) |
|  | **Analysis Modeling** |  |  |
|  | Identify Analysis Objects/Ops/Attributes | BAL, TL, DL |  |
|  | Produce Class/Collaboration Diagrams | BAL, TL, DL |  |
|  | Produce User Case Model Survey (Analysis) | BAL, TL, DL | UCMS (Analysis) |
|  | Write Use Case Realization Report (Analysis) | BAL. TL, DL | UCRR (Analysis) |
|  | Review & Finalize Use Case Realization Reports (Analysis) | QM, BA, BAL | UCRR (Analysis - final) |
|  | Produce UI Specification | TL, DL | UI Specs |
|  | Review UI Specifications (3 rounds) | TL, PM, UM | UI Specs (final) |
|  | Produce Prototype UI | TL, DL | Prototype |
|  | Review Prototype UI (3 rounds) | TL, PM, UM | Prototype (final) |
|  | Produce Prototyping Study Report | TL, DL, PM | Prototyping Report |
|  | Produce FS based on UCRR and Prototype UI | TL, DL | FS |
|  | Review FS | TL, QM, PM | FS (final) |
|  | Produce High-level DS | TL, DL | High-level DS |
|  | Review High-level DS | TL, QM, PM | High-level DS (final) |
|  | Prepare second Audit & Presentation | PM, QM, TL | Second PR |
|  | **Design Modeling** |  |  |
|  | Adjust objects to implementation architecture | TL, DL |  |
|  | Define Object Associations | TL, DL |  |
|  | Produce Sequence Diagrams | TL, DL |  |
|  | Specify Object Attributes/Operations | TL, DL |  |
|  | Structure Object Model for Implementation | TL, DL |  |
|  | Produce detailed DS | TL, DL | Detailed DS |
|  | Review & finalize detailed DS | PM, QM, TL | Detailed DS (final) |
|  | **Software Implementation** |  |  |
|  | Implement Code Components | TL, DL, DEV | System code |
|  | Peer Review and Unit Test | TL, DL, DEV | Unit test results |
|  | Integrate System Modules | TL, DL, DEV | Integrated System code |
|  | **System Integration Testing** |  |  |
|  | Identify Integration Test Approach and Test Plan | PM, TSL, TL | Test plan |
|  | Review & finalize Integration and Test Plan | PM, TSL, TL | Test plan (final) |
|  | Identify Test Cases based on Use Cases, prepare test script | TSL, TL | Test cases |
|  | Implement Test Environment | TL, TSL | Test environment |
|  | Prepare test data | BA, BAL | Test data |
|  | Perform System Test | TSL, TL | Test results |
|  | Additional Testing: stress test, performance test | TSL, TL | Test results |
|  | Analyze Results and Correct Defects | PM, TSL , TL | Corrected system code, test results |
|  | **User Acceptance Testing** |  |  |
|  | Prepare UAT environment | TL, DL, QM | UAT environment |
|  | Prepare UAT data | BAL, BA | UAT data |
|  | Conduct UAT | UM, TSL, PM, QM | UAT test results |
|  | Review Test Results/ Corrective Action | UM, QM, TSL, TL, DL | System code (final) & Test Results (final) |
|  | **Project Report and Closure** |  |  |
|  | Produce Final Project report | PM, QM | End of PR |
|  | Produce User Guide | TL, DL | User Guide |
|  | Review User Guide | UM, TL, PM | User Guide (final) |
|  | Produce Project Presentation & Audit | PM, QM | Third PR |

# PROJECT EFFORTS ESTIMATION

**Resource Legends**

|  |  |
| --- | --- |
| **Roles** | **Resources** |
| Project Manager - PM  Quality Manager - QM  Team Lead - TL  Development Lead - DL  Business Analyst Lead - BAL  Business Analyst - BA  Test Lead - TSL  Developer - DEV  Putative User Manager - UM | Dio  Peishan  Zaw  Feng Yan  Thida  Hazel  Jifa  All members  Dio, Peishan |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **EFFORT ESTIMATION (man-day)** | | | | | | | | |
|  | **Activity Description** | Dio  (PM) | Peishan (QM) | Thida (BAL) | Hazel (BA) | Zaw  (TL) | Feng Yan (DL) | Jifa  (TSL) |
| 1 | **Project Planning** |  |  |  |  |  |  |  |
| 1.1. | Produce Project Plan | 4 |  |  |  |  |  |  |
| 1.2. | Review Project Plan | 1.5 | 1.5 |  |  |  |  |  |
| 1.3. | Produce Quality Plan |  | 4 |  |  |  |  |  |
| 1.4. | Review Quality Plans | 1 | 1 |  |  |  |  |  |
| 1.5. | Prepare first Audit & Presentation | 2 | 2 |  |  |  |  |  |
| 2 | **Requirement Analysis** |  |  |  |  |  |  |  |
| 2.1. | Research Requirements | 2.5 |  | 5.5 | 5.5 |  |  |  |
| 2.2. | Produce User Requirements Specifications |  |  | 3 | 2.5 |  |  |  |
| 2.3. | Review User Requirement Specifications | 1.5 | 1.5 | 1.5 |  |  |  |  |
| 3 | **Analysis Modeling** |  |  |  |  |  |  |  |
| 3.1. | Identify Analysis Objects/Ops/Attributes |  |  | 1 |  | 1 | 1 |  |
| 3.2. | Produce Class/Collaboration Diagrams |  |  | 1 |  | 1 | 1 |  |
| 3.3. | Produce User Case Model Survey (Analysis) |  |  | 1 |  | 1 | 1 |  |
| 3.4. | Write Use Case Realization Report (Analysis) |  |  | 1 |  | 1 | 1 |  |
| 3.5. | Review & Finalize Use Case Realization Reports (Analysis) | 1 | 1 | 1 |  | 1 |  |  |
| 3.6. | Produce UI Specification |  |  |  |  | 1 | 1 |  |
| 3.7. | Review UI Specifications (3 rounds) | 1 | 1 |  |  | 1 |  |  |
| 3.8. | Produce Prototype UI |  |  |  |  | 1 | 1 |  |
| 3.9. | Review Prototype UI (3 rounds) | 1 | 1 |  |  | 1 |  |  |
| 3.10. | Produce Prototyping Study Report | 1 |  |  |  | 1 | 1 |  |
| 3.11. | Produce FS based on UCRR and Prototype UI |  |  |  |  | 1 | 1 |  |
| 3.12. | Review FS | 1 | 1 |  |  | 1 |  |  |
| 3.13. | Produce High-level DS |  |  |  |  | 1 | 1 |  |
| 3.14. | Review High-level DS | 1 | 1 |  |  | 1 |  |  |
| 3.15. | Prepare second Audit & Presentation | 1 | 1 |  |  | 1 |  |  |
| 4 | **Design Modeling** |  |  |  |  |  |  |  |
| 4.1. | Adjust objects to implementation architecture |  |  |  |  | 1 | 1 |  |
| 4.2. | Define Object Associations |  |  |  |  | 1 | 1 |  |
| 4.3. | Produce Sequence Diagrams |  |  |  |  | 1 | 1 |  |
| 4.4. | Specify Object Attributes/Operations |  |  |  |  | 1 | 1 |  |
| 4.5. | Structure Object Model for Implementation |  |  |  |  | 1 | 1 |  |
| 4.6. | Produce detailed DS |  |  |  |  | 1 | 1 |  |
| 4.7. | Review & finalize detailed DS | 1 | 1 |  |  | 1 |  |  |
| 5 | **Software Implementation** |  |  |  |  |  |  |  |
| 5.1. | Implement Code Components | 5 | 5 | 10 | 20 | 5 | 20 | 15 |
| 5.2. | Peer Review and Unit Test | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 5.3. | Integrate System Modules | 5 | 5 | 10 | 5 | 10 | 10 | 5 |
| 6 | **System Integration Testing** |  |  |  |  |  |  |  |
| 6.1. | Identify Integration Test Approach and Test Plan | 1 |  |  |  | 1 |  | 2,5 |
| 6.2. | Review & finalize Integration and Test Plan | 1 |  |  |  | 1 |  | 1.5 |
| 6.3. | Identify Test Cases based on Use Cases, prepare test script |  |  |  |  | 5 |  | 5 |
| 6.4. | Implement Test Environment |  |  |  |  | 1 |  | 1 |
| 6.5. | Prepare test data |  |  | 4.5 | 4.5 |  |  |  |
| 6.6. | Perform System Test |  |  |  |  | 1 |  | 1 |
| 6.7. | Additional Testing: stress test, performance test |  |  |  |  | 1 |  | 1 |
| 6.8. | Analyze Results and Correct Defects | 1 |  |  |  | 1 |  | 1 |
| **7** | **User Acceptance Testing** |  |  |  |  |  |  |  |
| 7.1. | Prepare UAT environment |  | 1 |  |  | 1 |  | 1 |
| 7.2. | Prepare UAT data |  |  | 4.5 | 4.5 |  |  |  |
| 7.3. | Conduct UAT | 5 | 5 |  |  |  |  | 5 |
| 7.4. | Review Test Results/ Corrective Action | 1 | 1 |  |  | 1 | 1 | 1 |
| **8** | **Project Report and Closure** |  |  |  |  |  |  |  |
| 8.1. | Produce Final Project report | 1 | 1 |  |  |  |  |  |
| 8.2. | Produce User Guide |  |  |  |  | 1 | 1 |  |
| 8.3. | Review User Guide | 1 | 1 |  |  | 1 |  |  |
| 8.4. | Produce Project Presentation & Audit | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | **Individual total** | **47.5** | **42** | **49** | **47** | **57** | **52** | **42.5** |
|  | **Project Total** | **337** |  |  |  |  |  |  |

# PROJECT MILESTONES AND TIMELINE.

Major milestones have been identified, as shown in the below figure:

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Activity | Approx. start date | Approx. end date |
|  | **Project Planning** |  |  |
|  | Produce Project Plan |  |  |
|  | Produce Quality Plan |  |  |
|  | Prepare First Audit & Presentation |  |  |
|  | **Requirement Analysis** |  |  |
|  | Produce User Requirements Specifications |  |  |
|  | **Analysis Modeling** |  |  |
|  | Produce Functional Specifications |  |  |
|  | Produce High-level Design Specifications |  |  |
|  | Produce Prototyping Study Report |  |  |
|  | Prepare Second Audit & Presentation |  |  |
|  | **Design Modeling** |  |  |
|  | Produce detailed DS |  |  |
|  | **Software Implementation** |  |  |
|  | Produce system code |  |  |
|  | Produce Integrated System |  |  |
|  | **System Integration Testing** |  |  |
|  | Produce Test plan and test script |  |  |
|  | Perform System Integration Test |  |  |
|  | **User Acceptance Testing** |  |  |
|  | Prepare UAT environment, test script and test data |  |  |
|  | Perform UAT |  |  |
|  | **Project Report and Closure** |  |  |
|  | Produce Final Project report |  |  |
|  | Produce User Guide |  |  |
|  | Produce Project Presentation & Audit |  |  |

# PROJECT DELIVERABLES.

By undertaking the work described in this plan, the following deliverables will be produced by the project:

* + - Project Plan.
    - Quality Plan.
    - User Requirement Specifications.
    - First Presentation and Audit
    - Functional Specification: Use Case Model Survey and User Case Realization Report (Analysis) – one per use case
    - High-level Design Specifications: Proposed Software Architecture and Transition Strategy from Analysis to Design
    - Prototyping Study Report
    - Second Presentation and Audit
    - Detailed Design Specifications
    - Source and Executable Code.
    - Test Plan and other test documents
    - User Guide
    - End of Project Report
    - Final Project Presentation

# RESOURCES.

The supporting resources required to enable the project team to undertake the activities specified in Section 4 (WBS) are described as below:

## Computer Hardware and Software.

The team will use these following hardware and software during the whole project timeline:

* + - Laptop or desktop with Windows environment
    - Eclipse IDE
    - Java Programming Language
    - Hibernate Framework
    - Spring Framework
    - Microsoft SQL Server
    - Microsoft Office
    - And other components required for the VMS development.

|  |  |  |
| --- | --- | --- |
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| **Document Ref** VMS/PMP/0.1 |  | |
| **Approved by** | **Date** | |
| **Authorized by** | **Date** | |
| The document authorization appears on the title page. | |  |
| The structure of the publication is logical. | |  |
| The distribution list is correct. | |  |
| The title page is signed. | |  |
| Calculations appear reasonable, are neatly presented and have been checked. | |  |
| Theory and formulae are correct and properly applied. | |  |
| Illustrations are relevant, readable and logically placed. | |  |
| There are no typographical errors. | |  |
| Units are consistent throughout. | |  |
| The security classification is correct. | |  |
| There are no obvious omissions. | |  |
| The document complies with the Client's requirements, however specified. | |  |
| Responsibility is accepted for all opinions, conclusions and recommendations. | |  |
| The document does not run counter to company policy. | |  |
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# Appendices

## Appendix A: Effort Estimation based on Function Point Counter (FPC) & COCOMO

<<Refer to PM-1/PM-1.2/PM-1.2.1/FPC>>

**Appendix B**: Risk Questionnaires

**Appendix C:** List of Prioritized Tasks

**Appendix D:** Precedence Tasks Network

**Appendix E:** Risk Management Techniques