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| Quality Plan |
| Cylinders & Orders Management System (COMS) Project |
| This document defines the team organization; the deliverables and sign off procedures; the planning and control procedures; the standards, methods and tools; and the controls to be applied in order to minimise risk and ensure the delivery of a system of high quality. |

3/7/2011

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**Cylinders & Orders Management System (COMS)  
 Project**

**Quality Plan**

**Distribution:**

|  |  |  |
| --- | --- | --- |
| **Name** | **Department** | **Organisation** |
| Truong Thieu Duong | Main Office | Hoang Kim Joint Stock Company |
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| Maung Tin Kyaw Oo | SE18-Team2S | MTech (ISS) |
| Chang Parkk Khiong Alvin | SE18-Team2S | MTech (ISS) |
| Koh Ming Jin | SE18-Team2S | MTech (ISS) |
| Junaith | SE18-Team2S | MTech (ISS) |
| Phyo Phyo Lwin | SE18-Team2S | MTech (ISS) |

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# 1.0 INTRODUCTION

Hoang Kim Joint Stock Company is one of the leading providers of printing cylinders in Vietnam. They currently use the latest technologies from Germany and Japan, and their client base includes various Vietnamese corporations as well as across Southeast Asia.

The company would like to have an integrated IT system that can:

* Manage the main manufacturing process, i.e. sales orders and cylinders.
* Benchmark employees’ performance to calculate bonuses.
* Give management reporting tools for daily operations.
* Be easy to maintain and to add new features in the future.

## 1.1 Purpose

This document defines the team organization; the deliverables and sign off procedures; the planning and control procedures; the standards, methods and tools; and the controls to be applied in order to minimise risk and ensure the delivery of a system of high quality.

## 1.2 Audience

The intended readers of this Quality Plan are all the participants in this project, to provide them a plan for the activities that they are to perform to minimise risk and ensure that they deliver a high quality system.

## 1.3 Organization

Section 2 presents the project team structure, and section 3 describes the interfaces between the project team and the Client. Section 4 specifies the organisation and filing structure of project documentation. Section 5 outlines the work plan and the deliverables to be produced.

Section 6 defines the methods to be used to plan and control the project and section 7 specifies the quality controls that are to be employed. The standards to be applied to the work programme are presented in Section 8. Finally, the procedures to be adopted to control changes are specified in Section 9.

## 1.4 References

To fully understand this document, the reader should also be familiar with the following documents:

* COMS Project Plan (reference GG/COMS/MP.1/v1.0)

# 2.0 PROJECT ORGANIZATION

The purpose of this section is to define how the COMS project will be organised to deliver a system of acceptable quality to the user.

The project structure is outlined as below, however the terms of reference for each project member are described in more detail in Appendix B.

Figure 2.1: Project Organization

# 3.0 LIAISON WITH CLIENT

The points of liaison between Client representatives and their respective counterparts within the software project team are as given in the following table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Team** | | | **Client** | |
| **Responsibility** | **Name** | **Deputy** | **Name** | **Deputy** |
| Project Management | Tran Ba Tien | None | Truong Thieu Duong | None |
| Technical Matters | Maung Tin Kyaw Oo | None | Truong Thieu Duong | None |
| Quality | Alvin Chang | None | Truong Thieu Duong | None |
| Project Leader | Tran Ba Tien | None | Truong Thieu Duong | None |

Figure 3.1: Project / Client Liaison

# 4.0 DOCUMENTATION ORGANIZATION

The project documentation and media will be organized in a number of files as defined in the Project Filing Procedure (Section 11).

Files will be maintained up-to-date according to the procedures defined in Section 9.2. Three basic types of files will be maintained:

1. Management files
2. Technical files
3. Software files

The master file directory (MFD) and the file contents form for each file will be kept up to date at all times (examples are given in Appendix A/2 and A/3). The initial filing structure to be set-up by the project is shown in Figures 4.1 and 4.2. Other files will be added (and documented in the MFD) as and when required. The hardcopy (signed-off) documents will be kept as backup by **Tran Ba Tien.**

We are storing all files in Google Code (<http://code.google.com/>) under the “MIT License” (refer to Appendix C for the details of the license).

The format and layout of the plans, specifications and user documentation will follow the same conventions as this quality plan.

## 4.1 Management Files

|  |  |  |
| --- | --- | --- |
| **File Category** | **File Reference** | **File Description / Softcopy Directory Path** |
| Project  Communications | GG/COMS/MC.1 | External Correspondence  /Documentation/Management/ Communications/External Correspondence/ |
| GG/COMS/MC.2 | Internal Correspondence  /Documentation/Management/ Communications/Internal Correspondence/ |
| GG/COMS/ML.1 | Project Log  /Documentation/Management/  Communications/Project Logs/ |
| GG/COMS/MM.1 | Meeting Minutes  /Documentation/Management/ Communications/Meetings/ |
| Plans | GG/COMS/MP.1 | Project Plan  /Documentation/Management/Plans/Project Plan/ |
| GG/COMS/MP.2 | System Test Plan  /Documentation/Management/Plans/System Test Plan/ |
| GG/COMS/MP.3 | User Trial Plan  /Documentation/Management/Plans/User Trial Plan/ |
| Quality | GG/COMS/MQ.1 | Quality Plan  /Documentation/Management/Quality/Quality Plan/ |
| Reporting and  Progress Control | GG/COMS/MR.1 | Time / Progress Reports  /Documentation/Management/Reporting/ TimeReport/  /Documentation/Management/Reporting/ ProgressReport/  /Documentation/Management/Reporting/ PrototypeReport/ |
| GG/COMS/ME.1 | Estimates  /Documentation/Management/Reporting/ Estimates/ |

Figure 4.1: Management Files

## 4.2 Technical Files

|  |  |  |
| --- | --- | --- |
| **File Category** | **File Reference** | **File Description / Softcopy Directory Path** |
| Technical  Specifications | GG/COMS/TS.1 | User Requirements Specifications  /Documentation/Technical/Technical Specifications/User Requirements Specifications/ |
| GG/COMS/TS.2 | High Level Design Specifications  ~~/Documentation/Technical/Technical Specifications/System Specifications/ UCRR\_Analysis~~  High Level Design Specifications  /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis |
| ISS/COMS/TS.2/4.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Authentication\_UCRR.doc |
| ISS/COMS/TS.2/1.6.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Change\_CylinderPriority\_UCRR.doc |
| ISS/COMS/TS.2/1.3.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Export\_Workflow\_Queues\_UCRR.doc |
| ISS/COMS/TS.2/1.2.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Login\_UCRR.doc |
| ISS/COMS/TS.2/1.2.2 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Logout\_UCRR.doc |
| ISS/COMS/TS.2/1.1.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Manage\_Error\_UCRR.doc |
| ISS/COMS/TS.2/1.4.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Manage\_SalesOrder\_UCRR.doc |
| ISS/COMS/TS.2/4.2 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_SalesOrderManagement\_UCRR.doc |
| ISS/COMS/TS.2/1.8.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Send\_CylinderToAParticularStep\_UCRR.doc |
| ISS/COMS/TS.2/1.7.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Start\_CylinderProductionProcess\_UCRR.doc |
| ISS/COMS/TS.2/1.7.2 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_Stop\_CylinderProductionProcess\_UCRR.doc |
| ISS/COMS/TS.2/1.6.2 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_View&Print\_CylinderInformation\_UCRR.doc |
| ISS/COMS/TS.2/1.5.1 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_View\_EmployeeDetails\_UCRR.doc |
| ISS/COMS/TS.2/1.1.2 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_View\_Error\_UCRR.doc |
| ISS/COMS/TS.2/1.4.2 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_View\_SalesOrder\_UCRR.doc |
| ISS/COMS/TS.2/1.3.2 | /Documentation/Technical/Technical Specifications/User Requirements Specifications/COMS\_View\_WorkflowQueues\_UCRR.doc |
|
|
|
|  |  |
| ISS/COMS/TS.2/2.1.1 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/Manage Performance Formula - Analysis UCRR.doc |
| ISS/COMS/TS.2/2.1.2 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/View Performance Formula - Analysis UCRR.doc |
| ISS/COMS/TS.2/2.2.1 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/Print Step List - Analysis UCRR.doc |
| ISS/COMS/TS.2/2.2.2 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/View Step List - Analysis UCRR.doc |
| ISS/COMS/TS.2/2.3.1 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/Print Worker Marks Report - Analysis UCRR.doc |
| ISS/COMS/TS.2/2.4.1 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/Update Cylinder Status - Analysis UCRR.doc |
| ISS/COMS/TS.2/6.1 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/View Cylinder Progress Log - Analysis UCRR.doc |
| ISS/COMS/TS.2/6.1.1 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/View Cylinder Progress Log List -Analysis UCRR.doc |
| ISS/COMS/TS.2/6.2 | /Documentation/Technical/Technical Specifications/ High Level Design Specification / UCRR\_Analysis/View Order Progress Log - Analysis UCRR.doc |
|
|
| GG/COMS/TS.3 | Design Model Report  /Documentation/Technical/Technical Specifications/Design Model Report/ |
| GG/COMS/TS.4 | Enhancement Specifications  /Documentation/Technical/Technical Specifications/Enhancement Specifications/ |
| User Documents | GG/COMS/TU.1 | User’s Manual  /Documentation/Technical/User Documents/ |
| Software  Configuration  Management | GG/COMS/TC.1 | Observation Reports Logs  /Documentation/Technical/Software Configuration Management/Observation Reports Logs/ |
| GG/COMS/TC.2 | Change Logs  /Documentation/Technical/Software Configuration Management/Change Logs/ |
| GG/COMS/TC.3 | Configuration Logs  /Documentation/Technical/Software Configuration Management/Configuration Logs/ |

Figure 4.2: Technical Files

## 4.3 Software Files

|  |  |  |
| --- | --- | --- |
| **File Category** | **File Reference** | **File Description** |
| Menu / Help Files | GG/COMS/CO.1 | Translated files containing menus, help messages and other online messages translated into Vietnamese  /Source Code/Translations/ |
| Source and Executable Code Files | GG/COMS/CO.2 | Files containing the full and accepted (by GoldenGravure) COMS software  /Source Code/COMS/ |
| 3rd Party Software | GG/COMS/SW.1 | List of 3rd Party Software Used In Project  /Software/ |

Figure 4.3: Software Files

# 5.0 WORK PLAN AND DELIVERABLES

The following subsections summarise the work programme to be carried out by the project and the deliverables that will be produced.

## 5.1 Work Plan

The work plan to undertake the development of the Cylinders & Orders Management System (COMS) is described in detail in the project plan (reference GG/COMS/MP.1/v1.0). The plan is briefly as follows:

* Activity 1: Initial Planning
* Activity 2: Requirements Identification
* Activity 3: Requirements Specification
* Activity 4: Design Modelling
* Activity 5: Programming
* Activity 6: Database Migration
* Activity 7: Systems Testing
* Activity 8: User Trial / Acceptance

## 5.2 Deliverables

Deliverables will fall into one of the two categories detailed below:

1. System deliverables; and
2. Management deliverables

Figures 5.1 and 5.2 define the deliverables and acceptance procedures for all end products.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Deliverable** | **File Reference** | **Acceptance Procedures** |
| 1 | User Requirements Spec. | GG/COMS/TS.1 | See section 7.3.1. |
| 2 | High Level Design Specification | GG/COMS/TS.2 | See section 7.3.1. |
| 3 | Enhancement Specification | GG/COMS/TS.4 | See section 7.3.1. |
| 4 | User’s Manual | GG/COMS/TU.1 | See section 7.3.1. |
| 5 | Design Model Report | GG/COMS/TS.3 | See section 7.3.2. |
| 6 | System Testing Workfile | GG/COMS/TW.3 | See section 7.3.2. |
| 7 | Software Configuration Management Documentation | GG/COMS/TC.1  GG/COMS/TC.2  GG/COMS/TC.3 | See section 7.3.2. |
| 8 | Menu/Help Files (from Translator) | GG/COMS/CO.1 | See section 7.3.3. |
| 9 | Source and Executable Code | GG/COMS/CO.2 | See section 7.3.4. |

Figure 5.1: System Deliverables

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Deliverable** | **File Reference** | **Acceptance Procedures** |
| 1 | Project Plan | GG/COMS/MP.1 | See section 7.3.5. |
| 2 | Quality Plan | GG/COMS/MQ.1 | See section 7.3.5. |
| 3 | System Test Plan | GG/COMS/MP.2 | See section 7.2.1. |
| 4 | Progress Reports | GG/COMS/MR.1 | See section 7.3.6. |

Figure 5.2: Management Deliverables

# 6.0 PLANNING AND PROGRESS CONTROL

This section describes the methods that will be used by the project to plan the development of the system, delegate planned work tasks to project team members, and monitor and control progress against the plan.

## 6.1 Project Planning

The overall plan for the work to be done on the project is described in the Project Plan (reference GG/COMS/MP.2/v1.0). More detailed plans will also be produced for significant technical areas of the project (management deliverables 2 through 4 in Figure 5.2). Briefly, these detailed plans address:

1. Quality Assurance (this document);
2. System Testing; and
3. User Trial.

## 6.2 Project Control

To monitor and control progress against the project plan, the following methods will be used:

### 6.2.1 Staff Effort Reports

* Each week, project team members will record the time (in hours) they have spent on each project subtask on a (monthly) Time Reporting Form (an example is given at Appendix A/6);
* At the end of each month, totals for the month and cumulative totals to date will be calculated and entered on to the progress report. The sheets will be filed at GG/COMS/MR.1;

### 6.2.2 Estimates to Complete

* At the end of each month, estimates to complete each task will be calculated for each project team member using a Situation Report Form (an example is given at Appendix A/7), and filed at GG/COMS/ME.1. These estimates will be used to assess whether the milestones specified in the project plan can be met or whether they need to be revised;

### 6.2.3 Project Logs

* A project log will be maintained throughout the project to record all significant events associated with the project, such as the issue of deliverables and decisions made by **Tran Ba Tien** and **Truong Thieu Duong**. The log will be filed at GG/COMS/ML.1.

### 6.2.4 Progress Monitoring

* Weekly progress meetings will be held and attended by the project team members. Brief minutes of these meetings will be produced by **Junaith** and filed at GG/COMS/MM.1.
* The project progress will be reported by **Tran Ba Tien** at the meeting and documented in the minutes. The progress report will briefly summarize technical progress, itemize milestones that have been obtained, highlight problems such as milestones which are not expected to be attained on their planned dates, and plans for the next period.

## 6.3 Delegation of Work

The task assignments for the project team are defined in the project plan and the quality plan. If additional task assignments are required, then they will be assigned during the meetings and formally recorded in the minute meetings.

# 7.0 QUALITY CONTROLS

To control the quality of the deliverables produced by the project, a programme of reviews will be carried out on the deliverable documents, and testing will be applied to the software. The reviews and testing procedures will result in the formal acceptance of each deliverables. These quality controls are described in the following subsections.

## 7.1 Schedule of Reviews

The document reviews to be carried out are shown in Figure 7.1 below. The actions which result from each review will be recorded in brief minutes (filed at GG/COMS/MM.1). Outstanding actions will be reviewed at the monthly progress meetings.

## 7.2 Software Testing

To exercise quality control over the software produced the following testing procedures will be carried out:

1. System testing; and
2. Acceptance testing by a user trial.

A system test plan will be produced and documented (GG/COMS/MP.2) to define the testing approach and give detailed testing instructions to define how the users will test the system. A user trial plan (GG/COMS/MP.3) will also be produced.

## 7.3 Acceptance Procedures

The acceptance procedures described below will be followed for the deliverables detailed in Figures 5.1 and 5.2.

### 7.3.1 Client Deliverable Documents

A draft version of the document will be internally reviewed by the **Tran Ba Tien** and the **Alvin Chang**, and changes specified by the review will be made.

**Truong Thieu Duong** will be issued with the reviewed document. A meeting will then be held with him to explain the document and determine any required changes. A final version of the document will then be issued incorporating these changes.

### 7.3.2 Internal Project Documents

A draft version of the document will be internally reviewed by **Tran Ba Tien** and/or **Alvin Chang**.

The changes specified by the review will be made, and a final version will be produced. **The reviewer(s)** will then be issued with the document.

|  |  |  |  |
| --- | --- | --- | --- |
| **Document** | **Reference** | **Reviewer(s)** | **Approx Date** |
| Project Plan | GG/COMS/MP.2 | Tran Ba Tien & Alvin Chang & Truong Thieu Duong | 10/02/2011 |
| Quality Plan | GG/COMS/MQ.1 | Tran Ba Tien & Alvin Chang | 19/02/2011 |
| User Requirements Spec.(1st Draft) | GG/COMS/TS.1 | Tran Ba Tien & Alvin Chang | 09/03/2011 |
| User Requirements Spec.(2nd Draft) | GG/COMS/TS.1 | Truong Thieu Duong | 16/03/2011 |
| High Level Design Specification (1st Draft) | GG/COMS/TS.2 | Tran Ba Tien & Alvin Chang & Maung Tin Kyaw Oo | 25/05/2011 |
| High Level Design Specification (2nd Draft) | GG/COMS/TS.2 | Truong Thieu Duong | 01/06/2011 |
| Enhancement Specification (1st Draft) | GG/COMS/TS.4 | Tran Ba Tien & Alvin Chang & Maung Tin Kyaw Oo | Optional |
| Enhancement Specification (2nd Draft) | GG/COMS/TS.4 | Truong Thieu Duong | Optional |
| System Test Plan | GG/COMS/MP.5 | Maung Tin Kyaw Oo | 01/11/2011 |
| System Testing Workfile | GG/COMS/TW.4 | Tran Ba Tien | 01/11/2011 |
| User Trial Plan (1st Draft) | GG/COMS/MP.6 | Tran Ba Tien & Alvin Chang | 12/12/2011 |
| User Trial Plan (2nd Draft) | GG/COMS/MP.6 | Truong Thieu Duong | 19/12/2011 |
| User’s Manual (1st Draft) | GG/COMS/TU.1 | Tran Ba Tien & Alvin Chang | 30/11/2011 |
| User’s Manual (2nd Draft) | GG/COMS/TU.1 | Truong Thieu Duong | 07/12/2011 |
| Design Model Report | GG/COMS/TS.3 | Tran Ba Tien & Alvin Chang | 07/07/2011 |
| Software Configuration Manual Document | GG/COMS/TC.1 GG/COMS/TC.2 GG/COMS/TC.3 | Tran Ba Tien & Maung Tin Kyaw Oo | 14/12/2011 |

Figure 7.1: Schedule of Reviews

### 7.3.3 Software

**Tran Ba Tien** will liaise with **Truong Thieu Duong** to arrange the User Trial and ensure that appropriate user staff are available to conduct the test. **Tran Ba Tien** will also agree with the user, the duration of the trial and the method by which the users should report errors, observations and suggestions.

These will be documented in a User Trial Plan. At the end of the trial, a meeting will be held at which the users and the project team will review the reports from the trial (errors, observations and suggestions), and agree the changes to be made to the software. When the final changes have been successfully completed to the satisfaction of the users, **Truong Thieu Duong** will be invited to accept the software.

# 8.0 STANDARDS, METHODS AND TOOLS

The work plan section of the project plan defines the work to be carried out under each task. Where necessary and appropriate, pre-specified procedures (in the form of, for example, standards, methods and tools) will be applied to the technical and management activities. For activities which no procedure has been specified, it is assumed that project team members will use their own judgment to choose appropriate methods. The procedures that will be applied are specified in Figures 8.1 and 8.2 below.

## 8.1 General Project Procedures

|  |  |  |
| --- | --- | --- |
| **Activity** | **Procedure** | **File Reference** |
| Document Control | See section 10.2 of Quality Plan | GG/COMS/MQ.1/1 |
| Requirement Control | See section 10.1 of Quality Plan | GG/COMS/MQ.1/1 |
| Document Format, Style, Layout and Conventions | See section 4 of Quality Plan | GG/COMS/MQ.1/1 |

Figure 8.1: General Project Procedures.

## 8.2 Software Development Procedures

|  |  |  |
| --- | --- | --- |
| **Activity** | **Procedure** | **File Reference** |
| Prototyping | .NET software framework | N/A |
| Software Coding | .NET software framework | N/A |
| System Testing | System Test Plan | GG/COMS/MP.5 |
| Acceptance Testing | User Trial Plan | GG/COMS/MP.6 |
| Software Configuration Management | See section 9.3 of Quality Plan | GG/COMS/MQ.1/1 |

Figure 8.2: Software Development Procedures.

# 9. CHANGE CONTROL

The procedures that will be used to control changes to requirements, project documents and software are described in the following subsections.

## 9.1 Control of Requirements

Change control procedures will only apply after the high level design specification has been signed off by **Truong Thieu Duong**. Any change request after this time will be processed using the following procedure:

1. Change control request will be submitted by **Truong Thieu Duong** in the form of an internal memorandum to **Tran Ba Tien**;
2. **Tran Ba Tien & Maung Tin Kyaw Oo** will evaluate the financial, technical and timescale impacts on the project, and will discuss these issues with **Truong Thieu Duong**;
3. **Tran Ba Tien** and **Truong Thieu Duong** will jointly decide whether to action the change request; and
4. If they decide to action the request, then their approval will be confirmed in an internal memorandum from **Tran Ba Tien** to **Truong Thieu Duong**, copied to Maung **Tin Kyaw Oo** and **Alvin Chang**.

All internal correspondence generated by the above change procedure will be filed at GG/COMS/MC.2.

## 9.2 Documentation Control

For all the system and management deliverable documents defined in Figures 5.1 and 5.2, the following document control procedures will be applied:

### 9.2.1 Reference Numbers

All project deliverable documents must have a reference number. These numbers will be allocated according to the rules laid down in the Project Filing Procedure (Section 11).

### 9.2.2 Approval Procedures

The title page and the approval record must be completed by both an Approver and/or an Authoriser prior to the release of any new version of any project deliverable document.

### 9.2.3 First Version

When a document is first produced it is entered into the project filing system by entering its name into the file contents form of the appropriate sub-file. For example, GG/COMS/MP.2/2 will be entered as the second item in the contents form for the sub-file GG/COMS/MP.2 - the sub-file for project plans. At this stage, the document will have a title page which shows the document at version 1.

### 9.2.4 Updated Versions

When a document is amended, the version number of the document will be increased by 1. For example, version 1 would be changed to version 2. Changes made after a review will increase the minor version number (.1), for example 1 will become 1.1. The title page will show the new version number and date of amendment. Amendment record sheets (see Appendix A/4) will be added before the contents page to highlight the changes made to produce THIS version. Any amendment sheets created for previous versions will be discarded. The WHOLE amended document will then be re-issued.

### 9.2.5 Filing

A softcopy of each document should be stored in the appropriate sub-file - this includes ALL issued versions of each document.

## 9.3 Software Configuration Management

Throughout the coding and testing of the software, configuration management procedures will not be used. However, when the software has received formal acceptance from **Truong Thieu Duong**, Version 1.0 will be issued and the following procedures will be used:

### 9.3.1 Observation Reports

Reports of errors or problems incurred by users while using the system, or suggestions for enhancements will be recorded using a Change Request Form (see Appendix A/7). These will be filed at GG/COMS/TC.1 and copied to **Tran Ba Tien**. The Enhancement Specification document will record the list of changes specified in the Change Request Forms.

### 9.3.2 Change Authority

**Tran Ba Tien** will review each observation report and will have the authority to decide whether to task **Tin Kyaw Oo** to implement the change. The approval of the change by **Tran Ba Tien** will be indicated by an internal memorandum to **Truong Thieu Duong**, copied to **Tin Kyaw Oo** and **Alvin Chang**.

### 9.3.3 Record of Changes

The changes for the source code can be referenced via the version history stored in the version control in our softcopy store(i.e. subversion).

### 9.3.4 Testing of Changes

The testing and verification of the changes made to the software will be recorded in a bugtracker software. This will list the testing activities that were carried out for each change, verify that all tests were successful, and provide references to the project files (typically workfiles) that contain the details of the tests and test results.

### 9.3.5 Software Configuration

A Configuration Log will be kept of all versions of the software that are issued in terms of the program modules that comprise each version and the hardware configuration. The log will be filed at GG/COMS/TC.3.

# 10. USER CONTROL

To ensure that effective liaison occurs with **Truong Thieu Duong**, the following procedures will be applied.

## 10.1 User Requirements Specification.

The project will undertake requirements analysis by liaising closely with **Truong Thieu Duong** to identify the user requirements. An initial user requirements specification will then be issued to **Truong Thieu Duong** to determine any required additional requirements.

A final version of the document will be issued incorporating the changes. To signify final acceptance, **Truong Thieu Duong** will be required to sign in the space provided at the front of the document. After the user requirement specification has been accepted by **Truong Thieu Duong**, a series of prototypes will be produced.

## 10.2. Prototyping.

The detailed requirements for the software to be developed will be determined by creating a series of prototypes using the .NET development package under WINDOWS. Each prototype program will be demonstrated to **Truong Thieu Duong** to determine the acceptability of screen layouts, report formats and methods of operation (menus, function keys, etc).

As a result of each prototype demonstration, agreed changes will be included in the next prototype. Hence, each prototype builds on the functionality of the previous until it is agreed with **Truong Thieu Duong** that the latest prototype represents the full detailed requirements for the software to be developed.

## 10.3. Design Specification.

**Truong Thieu Duong** will be issued with the second draft of the document. Any changes will be communicated to the project team via email and/or phone. A final version of the document will then be issued incorporating these changes.

To signify final acceptance, **Truong Thieu Duong** will be required to sign in the space provided at the front of the document. After the system specification has been accepted by **Truong Thieu Duong** any changes required to the detailed software requirement will need to be processed by the change control procedure described in section 9.1.

## 10.4. Enhancement Specification.

As described above for the System Specification.

## 10.5. User Trial Plan.

As described above for the System Specification.

## 10.6. User’s Manual.

As described above for the System Specification.

## 10.7. Acceptance of the Software.

User acceptance of the software will be achieved by a User Trial as described in Section 7.3.3. During the trial, the users will be able to use the system in their everyday work and feedback any problems with the system that they discover.

At the end of the trial, a meeting will be held at which the users and the project team will agree any changes that need to be made to the software. When the final changes have been successfully completed to the satisfaction of the users, **Truong Thieu Duong** will be invited to accept the software. This will be formally achieved by **Truong Thieu Duong** stating that the system is acceptable in an internal memorandum to **Tran Ba Tien**.

# 11 PROJECT PROCEDURES

The following section defines the various procedures that are to be carried out during the course of the project.

## 11.1 Filing Procedures

All system and management deliverables are to be printed in hardcopy and filed in the binder held by **Tran Ba Tien**, and the Master File Directory (MFD) to be updated.

All softcopy files are to be updated into the SVN. The path is stated in section 4 of this document.

# Appendix A: PROJECT PROFORMA.

The aim of this appendix is present examples of the administrative proforma that will be used by the project. These are as follows:

1. Master File Directory Form (MFD);
2. File Contents Form;
3. Amendment Record Form;
4. Time Reporting Form;
5. Situation Report Form; and
6. Change Request Form.

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| Master File Directory Form GG/Forms/MFD | | | | | | | | | | | | | | | | |
| **Project Name** Cylinders & Orders Management System (COMS) | | | | | | | | | | | | | | | | |
| **Prepared by** | | | | | | **Date** | | | | | | | | | | |
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| File Contents Form GG/Forms/FCF | | | | | | | | | | | | | | | | |
| **Project Name** Cylinders & Orders Management System (COMS) | | | | | | | | | | | | | | | | |
| **Prepared by** | | | | | | **Date** | | | | | **Ref**  GG/COMS/ | | | | | |
| **File Name** | | | | | | | | | | | | | | | | |
| **File Description** | | | | | | | | | | | | | | | | |
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| **Date** | | **Document Ref** GG/COMS/ | | | | | | | | | | | | | | |
| **Version No.** | | **Version Description.** | | | | | | | | | | | | | | |
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| Time Reporting Form GG/Forms/TRS | | | | | | | | | | | | | | | | |
| **Project Name** Cylinders & Orders Management System (COMS) | | | | | | | | | | | | | | | | |
| **Staff Name** | | | | | **Date** | | | | | | **Ref**  GG/COMS/MR.1/ | | | | | |
| **Report Period** | | | | | **Start date  End date** | | | | | | | | | | | |
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| Situation Report Form GG/Forms/SR | | | | | | | | | | | | | | | | |
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| **Staff Name** | | | | | | **Date** | | | | | **Ref**  GG/COMS/ME.1/ | | | | | |
| **Report Period** | | | | | | **Start date  End date** | | | | | | | | | | |
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| Change Request Form GG/Forms/CRF | | | | | | | | | | | | | | | | |
| **Project Name** Cylinders & Orders Management System (COMS)**Ref** GG/COMS/TC.2/ | | | | | | | | | | | | | | | | |
| **Prepared by Date** | | | | | | | | | | | | | | | | |
| **Requested by Date** | | | | | | | | | | | | | | | | |
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| **Work Description/Action** | | | | | | | | | | | | | | | | |
| **Authorisation Date** | | | | | | | | | | | | | | | | |
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| **New Sub-Version No** | | | | | | | **Cross References** | | | | | | | | | |

# Appendix B STAFF TERMS OF REFERENCE.

The roles and responsibilities of each project team member are described in the following subsections.

## B.1 PROJECT MANAGER – Tran Ba Tien

He will be responsible for the project on a month to month basis be reviewing progress against the plan and instituting appropriate action. In addition, he will provide advice to the Technical Leader on the structure and content of the deliverable project documents and will be responsible for the production of the required planning documents. The tasks to be undertaken by him are defined as below:

1. production of Project Plan;
2. production of User Requirement Specification;
3. production of Use Case Model Survey;
4. general project administration activities;
5. production of System Test Plan;
6. production of User Trial Plan;
7. production of progress reports;
8. user training and user trial support;

## B.2 QUALITY MANAGER - Alvin Chang

He will be responsible for ensuring the project progresses according to the standard set out in the Quality Assurance Plan. The tasks to be undertaken by him are defined as below:

1. production of Quality Plan;
2. setting up and maintaining the project filing system;
3. production of User’s Manual;

## B.3 TECHNICAL LEADER - Tin Kyaw Oo.

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

1. production of High Level Design Specifications;
2. prototyping development and production of prototyping report;
3. production of Design Model Report;
4. database define and set-up;
5. software coding;
6. testing and installation;

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| Approval Record GG/Forms/Approval | | |
| **Project Name** Cylinders & Orders Management System (COMS) | | |
| **Document Ref** GG/COMS/MQ.1/1 |  | |
| **Approved by** | **Date** | |
| **Authorised by** | **Date** | |
| The document authorisation appears on the title page. | |  |
| The structure of the document 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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