BORANG PENGESAHAN STATUS TESIS

JUDUL: SUB-CONTRACTOR PERFORMANCE QUALITY EVALUATION SYSTEM.

SESI PENGAJIAN: 2007

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SUB-CONTRACTOR PERFORMANCE QUALITY EVALUATION SYSTEM (PQeVS)

NUR FADHILLAH BINTI SALEH

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2007

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ADMISSION

I hereby declare that this project report entitled

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is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ **Date:** 12 NOV 2007
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DEDICATION

To my beloved parent and friends…

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ACKNOWLEDGEMENTS

I would like to thank Dr. Burairah bin Hussin for giving assistant to complete this project successfully.

I would also like to thank my beloved parents who have been giving me support and motivation throughout my project.

Lastly, I would also like to thank my beloved friends who have been giving me motivation to finish and all person that involve in evaluating this Projek Sarjana Muda II.

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ABSTRACT

This report is a synopsis of the whole Projek Sarjana Muda II for the fourth year Bachelor of Computer Science students. The main objective of this subject is to preparation of Projek Sarjana Muda II for the last semester. The project title is Sub-Contractor Performance Quality Evaluation System (PQeVS). This system is based from the real industry that gains the requirement from Selia Selenggara Selatan Sdn. Bhd. The current system is using conventional system. The new system is develop to solve all problems from current system such as redundant data, difficulty to search and update the evaluation information, analyze the information and difficulties to makes a decision from the performance evaluation. This system is to make an evaluation to the 300 sub-contractors that registered with the SSSSB. There is 4 item that must be evaluate consist of quality of works, report, safety and financial. Quality of works item includes 3 scopes that are specification, timely completion and manpower, machine, plant and tool. Report item includes 3 scopes which are claim, site report and photo. Safety item just include one scope that is safety requirement. Lastly, financial item just include one scope that is financial capability that base on material and team supplied, time delivery, quality and other relevant matter to precede works. It will enable the organization effectively to plan and select the required sub-contractor for their project and view the performance quality of each sub-contractors work. This system is more focus in routine maintenance works that include the certain item that to be evaluated. This system will calculate all marks or rating automatically and from the total score, district and type of work all users can view an analysis of the performance evaluation by report and graph.

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ABSTRAK

Laporan ini adalah sipnosis bagi Projek Sarjana Muda II bagi pelajar tahun empat daripada Ijazah Sarjana Muda Sains Komputer. Objektif utama bagi subjek ini adalah untuk persediaan bagi Projek Sarjana Muda II yang di ambil pada semester akhir. Tajuk bagi projek ini adalah Sistem Penilaian Kualiti Persembahan bagi Sub-Kontraktor. Sistem ini adalah berdasarkan industri sebenar di mana segala keperluan sistem diperolehi daripada Selia Selenggara Selatan Sdn. Bhd. Sistem semasa masih lagi menggunakan sistem manual. Sistem baru ini dibangunkan untuk menyelesaikan semua masalah yang berlaku pada sistem semasa seperti pertindihan data, kesukaran untuk mencari dan mengemaskini segala maklumat penilaian, analisa maklumat dan kesukaran untuk membuat keputusan. Sistem ini digunakan untuk membuat penilaian terhadap 300 kontraktor yang berdaftar dengan SSSSB. Terdapat 4 perkara yang mesti dinilai yang merangkumi kualiti kerja, laporan, keselamatan dan kewangan. Kualiti kerja merangkumi 3 skop iaitu spesifikasi, masa untuk penyelesaian, pekerja, mesin dan kilang/peralatan. Bagi laporan, terdapat 3 skop iaitu tuntutan, laporan tapak dan gambar. Bagi keselamatan hanya melibatkan satu skop iaitu keperluan keselamatan. Perkara yang terakhir adalah kewangan yang juga melibatkan satu skop iaitu kecekapan kewangan yang berdasarkan kepada bahan dan kumpulan bekalan, masa penghantaran, kualiti dan juga perkara yang termasuk dalam kerja yang lain. Ia akan membolehkan organisasi untuk merancang dengan berkesan dan membuat pemilihan kontraktor bagi setiap projek dan memaparkan kualiti persembahan kerja bagi setiap Sub-Kontraktor. Sistem ini tertumpu kepada penyelenggaraan bagi kerja-kerja rutin yang melibatkan beberapa perkara yang perlu dinilai. Sistem ini akan mengira semua markah dan kadar secara automatik dan pengguna boleh melihat analisis penilaian menggunakan laporan dan graf berdasarkan markah keseluruhan, daerah dan jenis kerja.

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LIST OF ABBREVIATIONS

PQeVS	-	**Sub-Contractor Performance Quality Evaluation System**
SSSSB	-	**Selia Selenggara Selatan Sdn. Bhd**
CMIS	-	**Contract Management Information System**
SSADM	-	**Structured System Analysis and Design Method**
SDLC	-	**System Development Life Cycle**
RAD	-	**Rapid Application Development**
DBLC	-	**Database Life Cycle**
ERD	-	**Entity Relationship Diagram**
DFD	-	**Data Flow Diagram**
DBMS	-	**Database Management System**
DSS	-	**Decision Support System**
PHP	-	**Personal Home Page**

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CHAPTER I

INTRODUCTION

This project is related to the real process that happen in Selia Selenggara Selatan Sdn. Bhd. (SSSSB). This system is seemed with the major activities in SSSSB that is road maintenance. So, I choose to more focus in routine maintenance for the evaluation performance and the quality of works that is one module from Contract Management Information System (CMIS) project.

The title of the project is the Sub-Contractor Performance Quality Evaluation System. This system is more to make an evaluation for 300 sub-contractors that registered with the SSSSB. From the 300 sub-contractors they are divided into several type of work in routine maintenance. This system will be developing based on requirement from Contract Department at SSSSB. It will enable the organization effectively to plan and select the required sub-contractor for their project and view the performance quality of sub-contractors work. So, in term to make evaluation, there is item that include the scope of each item and give a rating for every scope. This evaluation is important to select the quality sub-contractor before they be given routine works. Using this system, all users can view the quality of the sub-contractor before make a decision who of the sub-contractors are qualified for certain task.

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1.1 Project Background

This system is more in industry types because Selia Selenggara Selatan Sdn. Bhd. is wholly owned subsidiary of Bumi Hiway (M) Sdn. Bhd. The current system is still using conventional system that is manual system. There is a process to develop one system that is Contract Management Information System (CMIS) to improve the planning, implementation, tracking and reporting of the project and automating contractor selection cycle. During this time, CMIS is in second module from 6 modules. This system that has been develop is one of the module from CMIS project that focus on evaluating sub-contractors.

1.2 Problem Statements

i. Difficult to make a decision for Sub-Contractor evaluation. There is 4 item that must be evaluate consist of quality of works, report, safety and financial. Quality of works item includes 3 scopes that are specification, timely completion and manpower, machine, plant and tool. Report item includes 3 scopes that are claim, site report and photo. Safety item just include one scope that is safety requirement. Lastly, financial item just include one scope that is financial capability that base on material and team supplied, time delivery, quality and other relevant matter to precede works.

ii. Difficult to make an analysis by manual system to view the work performance tracking.

iii. Difficult to make a calculation in bill of quality because of the human weakness.

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1.3 Objective

i. **Able to make decision support to select quality sub-contractor.**

From the evaluation, Contract Department is easy to make a decision to select the Sub-Contractor that fulfill all requirement that needed by SSSSB. This system will display the evaluation performance of sub-contractor that interested to joint the tender and give their quotation. This system also can view all criteria that can help the management to make a decision such as grade, location, quality and type of work.

ii. **Generate automatic calculation for bill of quality performance.**

The current system is done manually using Microsoft Excel application for the new system it will calculate automatically and reducing human error. The quality information will be view within a month.

iii. **Maintainable Sub-Contractor quality and evaluation by producing report and graph.**

This system will produce a report to the end user for their references. The current system is not producing a graph or any other method that easy to understand by Contract Department. By using the bar graph and report we can view grade result by percent.

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1.4 Scope

The scope of this project is including the scope the system, users and other information that involve in this project. The user of this system is Management at Selia Selenggara Selatan Sdn. Bhd. All requirement or resources that need for this system are gain from SSSSB.

i. **On-line Registration and Verification**

It will enable the management at SSSSB to register and access the information in the system. This application will verify the user before allowed them to using the system.

ii. **Control the Evaluation and Performance Tracking**

Contract Department keeps the detail information of the routine project in the system. It will also control performance of the Sub-Contractor bill of quality and tracking the work progress. Area Manager will insert the rating and make the evaluation of the sub-contractors.

iii. **Generate a data to produce report and graft to view the evaluation and view by status.**

User of this system can view the report or graph from the evaluation process and they also view by status such as grade, location, quality and type of work.

iv. **Generate a result of calculation bill of quality.**

From the calculation, the management can make a decision to select the Sub-Contractor that fill the requirement and also view the performance assessment by status and by contractor name.

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1.5 Project Significance

i. Management at Selia Selenggara Selatan Sdn. Bhd will manage the evaluation with smoothly way, efficient and effectively.

ii. Using the Sub-Contractor Performance Quality Evaluation System, the in charge person will manage the evaluation process only on finger tip solution with less cost and budget.

iii. Produce a result using graft and report quickly and systematically

iv. Able to make the management determine the decision support for the Sub-Contractor performance and evaluation.

1.6 Expected Output

Management at Selia Selenggara Selatan Sdn, Bhd. can use the Sub-Contractor Performance Quality Evaluation System to make the evaluation and performance tracking to each of their Sub-Contractor that has been registered. Using this system, they will able to make a decision support from the evaluation to select the quality Sub-Contractor in SSSSB. From the evaluation, it can also produce the report and graph to see the average of grade by percent. Other than that, it can generate automatic calculation of bill of quality performance to view the evaluation.

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1.7 Conclusion

This chapter is covering project background, problem statement, objective, scope, project significance and expected output to the system that have to be develop. The next chapter is explaining about the developing planning and the system developing approach.

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CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

Literature review is a body of text that aims to review the critical points of current knowledge on particular topic. It such as a thesis but literature review is usually precedes a research proposal, methodology and result section. The aims of this project are to investigate the existing system that using by the user as a current system and make the features comparison between them. After that, we can import the feature or enhanced the current system to make the future system are different from the others. According to Cooper (1988) "a literature review uses as its database reports of primary or original scholarship, and does not report new primary scholarship itself. The primary reports used in the literature may be verbal, but in the vast majority of cases reports are written documents. Second a literature review seeks to describe, summarize, evaluate, clarify and integrate the content of primary reports".

Project methodology is refer to more than a simple set of method, rather it's refer to rationale or and the philosophical assumptions that underlie a particular study. Project methodology often refers to anything and everything that can be encapsulated for a discipline or a series of processes, activities and tasks. Project Methodology can help us easier to understand the user requirement that came from non IT fields.

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2.2 Facts and Findings

Before developing the system, there is an important process that has to go through that is a fact finding. Fact Finding is process collecting information whether work on alone or as a member of team during requirements modeling. There are various fact-finding techniques including interviews, document review, observation, surveys and questionnaire, sampling and research. Fact-finding involves an answer to five familiar questions: who, what, where, when and how. There is difference between asking what is being done and what could or should be done. The first step that must to understand is the current situation. Only then can tackle the question of what should be done. For develop this system, interview and observation technique is used to make an analysis and find the requirement.

2.2.1 Domain

The Sub-Contractor performance quality evaluation system is from industry domain. It is because this project is related with the Selia Selenggara Selatan Sdn. Bhd. that was a company that manages the registered sub-contractors. This system will helps this company in making decision support in the evaluation process and view the performance of the quality sub-contractors in SSSSB.

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