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# PROJECT DATA MANAGEMENT

ZAINAL ARIFFIN HJ AHMAD

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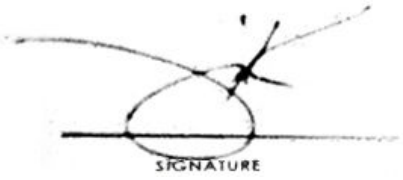


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# PROJECT DATA MANAGEMENT

ZAINAL ARIFFIN HJ AHMAD

A dissertation submitted in partial fulfillment
of the requirements for the award of the degree of
MSc. (Computer Science - Real Time Software Engineering)

Centre for Advance Software Engineering
Faculty of Computer Science and Information System
Universiti Teknologi Malaysia

APRIL 2009

I declare that this dissertation entitled "*Project Data Management for Custommedia Sdn Bhd)*" is the result of my own research except as cited in the references. The dissertation has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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Name : ZAINAL ARIFFIN HJ AHMAD

Date : APRIL 2009

This thesis is dedicated to my **beloved parents** and the rest of **family**, CASE, MFTFT18 batch, and friends.

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# ABSTRACT

Project may be long or short in period and it involves with many factors such as human, cost and procedures. Project has its own life cycle and its divide into stages and each stage has it own characteristics. In view of this, project required a systematic ways in managing the factors. Project Data Management or PDM for Customedia Sdn Bhd is a collaboration of Project Management with the Software Engineering practices that provided integration and monitoring of information between distributed projects that reduces the manual effort and time spent. PDM is an that application will assist the Project Manager in managing projects and it consists of six Project Management application namely Time Management, Risk Management, Issue, Change Request, Verification and Validation and QMS.

# ABSTRAK

Suatu Projek berkemungkinan berjangka panjang atau pendek yang melibatkan faktor-faktor lain saperti buruh, kos dan procedure. Sesuatu projek pempunyai pusingan jangka hanyat dan ia terbahagi kepada beberapa peringkat yang yang mempunyai ciri-ciri yang tersendiri. Berdasarkan cirri tersebut, suatu projek memerlukan pengurusan yang bersistematik. Sistem “Project Data Management “ atau PDM adalah berdasarkan satu penyatuan atau prinsip “Project Management” dan “Software Engineering Practice” yang membolehkan pengabungan diantara pengawasan maklumat di antara projek-projek untuk mengurangkan kerja-kerja secara manual dengan masa yang diambil. PDM adalah aplikasi yang membantu Pengurus Projek di dalam mengurus projek dan ia mempunyai enam aplikasi Pengurusan Projek ia itu Time Management, Risk Management, Issue, Change Request, Verification and Validation dan QMS.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| BPM | Business Process Modeling |
| CASE | Centre of Advanced Software Engineering |
| CAR | Causal Analysis and Resolution |
| CCB | Change Control Board |
| CMMi | Capability Maturity Model Integration |
| CMSB | Custommedia Sdn Bhd |
| CR | Change Request |
| CRL | Contractual Requirement List |
| F-One | Frame Work One |
| ISO | International Standard Organization |
| PCB | Process Capability Baseline |
| PDM | Project Data Management |
| PM | Project Manager |
| QMS | Quantitative Management System |
| RUP | Rational Unified Process |
| SDLC | Software Development Life Cycle |
| URS | User Requirement Spesification |
| WBS | Work Breakdown System |
| CCCC | Configuration & Change Control Coordinator |

# CHAPTER 1

# INTRODUCTION

## 1.1 Background of The Study

In view of Software Projects became more cross-functional in nature, Custommedia Sdn Bhd or CSMB is in the opinion to look for a system that can manage projects from end to end in a consistent manner. Communication and coordination across the processing areas within the organization are not always in a timely manner, as Project Management applications are not integrated together. Hence, to help improve communication and coordination, CSMB looks to Project Data Management (PDM) as a solution.

PDM is an application which make up of various Project Management Applications that integrate together under one repository system. The purpose of the system is to process project data that enable to have timely and quality output that will help in making decision. As for initial stage, the PDM system will focuses on the data input and monitoring project activities.

## 1.2 Company Background

The attachment or research study was done at The Customedia Sdn Bhd from period of 2nd January 2009 to 30th April 2009. The Custommedia Sdn Bhd or CMSB was incorporated in 1990 with the main business is developing software. The office is located at Technology Park Malaysia and employed more than 60 staff for various departments. Since CSMB was established, they have vast experience in software development and engineering. They have works from all areas of business such as government or non government agencies.

CMSB has produces many products in various areas such as Software Engineering Services, Multimedia Engineering Services and consultancy. With the outstanding product, the CSMB was awarded with CMMI certification for level 3, ISO 9001 certification and MSC status. The *Vision and Mission* of the CMSB are as follows :

"The vision of The Customedia Sdn Bhd is to become Malaysia's most reputable and profitable software powerhouse emphasizing on customer focus and providing for the well being of all employees and stakeholders." and the *Mission*
" To increase the productivity and quality of products and services globally. To enhance employees' work-life quality. To promote life-long learning knowledge worker environment. To increase creativity and innovation in software production and services "

Beside, developing software CSMB provides services on Solution Engineering, Education and Training, Multimedia Engineering and IT consultancy. They also active in various industry-driven as follows :-

- One of the founder and current president and secretariat of Malaysian Software Testing Board (MSTB).
- The MSTB representative to Asian Testing Alliance (ASTA)
- Programmed & Communication Director of Software Improvement Network (SPIN) – Malaysian chapter

### 1.2.1 The Application Products

The Customedia Sdn Bhd has the track records of having successful products in different types of areas:-

- *CoRNEA* is and an Integrated School Management System software for schools and educational institutions.
- *NutriMart* is a system able to calculate nutritional values of recipes, menus, meal and food items quickly and accurately.
- *PINTAS* i*s* an Interest Free Bank Islam Financing System (BIFS) for Bank Islam Berhad.

### 1.2.2 The Multimedia Services

The Customedia Sdn Bhd has also the track records of having successful services in multimedia development such as;

- *Ilham Product Series* an interactive educational and training CDs focusing on Hajj, Umrah and Ziarah In the Light of Four Islamic Schools of Jurisprudence
- *FASIH* series for Learning Arabic (Level 1, 2 and 3) in Arabic Languague for education purpose.

## 1.3 Problem Background

Project Management processing is a main area for every software development company. Hence, CSMB has taken various steps in improving this processing area such as by adopting CMMI and ISO standard that enable them to have consistence procedures. By automating this processing areas the CSMB will have efficient and effective in managing project therefore give quality output.

PDM is a system that assists Project manager in managing project. Initially, Change Synergy and CM Synergy system had been used in the organization since June 2005. The objectives of implementing these tools are to assist the project in managing the configuration items and to manage Change Request raised in the project. Subsequent from that, the Change Synergy System was customized for other used such as TimeSheet System, Defect Management System and Issue Tracking System.

Later, in the year 2006 The EPG Group initiate the Project data management. Project data Management application was started with version 1.o5 and it was comprised of Timesheet and Gantt Chart application. However, due to the limited scope and unable to accommodate the present requirement, the system was not in used.

Now, the CMSB's Management is looking at larger scope that the PDM will integrate all project management applications into a system. The PDM will comprise of Timesheet Management, Risk Management, Issues, Change Request, Verification and Validation and QMS at initial stage.

## 1.4 Problem Statement

This project is to identify the problems in the CSMB on the Project Data Management, hence this factors will guide in developing the PDM system. The following are the identified problems that will be focused in this research.

a. Why Project Data was not in a timely manner and unable to support organizational functions?

b. How to improve the present PDM system in the CSMB such as standards and functionalities?

## 1.5 The Purpose of Study

The purpose of this study is to provide overviews of the problems encounter by the CMSB and provide a solution in improving the processes.

a. To find out the process that caused the Project Data was not in a timely manner and unable to support in organizational functions.

b. To find out the method that enable to improve the present PDM system.

## 1.6 The Objective in the Study

The objective of Project Data Management (PDM) is :-

a. To identify whether the process that caused the data which is not in a timely manner as the Project Management applications or components are not integrated together.
b. To identify standard that enable in upgrading the present PDM in the CSMB.

## 1.7 Project Scope in the Study

The scope of the project embrace the Software Development Life Cycle (SDLC) methodology which in line with the organization standard procedures guidelines. SDLC consist of requirement gathering, development, testing and deployment which include documentation. The period of this project is governed by the internship timeframe that is from 2nd January 2009 to 30th April 2009 and the scope for this attachment covers on the initial studies of the project.

This system is tailored for the use of CSMB and it may not applicable to others company or outside the environment research. This system is a collaboration of Software Engineering and Project Management and it may be different from others system as it is depending on the durability of the methodology in developing the system. The data collected for this system is provided by CSMB, hence the inferences of this study can only be seen by other application that has the same characteristic.

This study depends on the identified problems that the author has found out earlier excluding other problems. At the initial stage the PDM will consists of six

components namely Time Management, Risk Management, Issue, Change Request, Verification and Validation, and QMS. Other components such as Cost Management and Human Resource are not included in this system.

The successful of this study depends on the fulfillment of the user requirement in developing the system. Thus, the information received during the requirement stage is important in proceed to the next stage. The effectiveness of PDM system will depend on the successful of the development stages.

Lastly, the result of this study referred to the requirement data for the period of the under study and it may be differs with other data beyond this period.

## 1.8 The Importance of the Study

Based on the problems statement and the project objectives as mentioned earlier, this study is important in giving information to CMSB staff as a guideline in developing the PDM system. They can use this information in planning for future development that suitable to the requirement demand at that time.

In facts, this study is also important because it might shows the successful of the system if the steps recommended are follows such as enhance the procedures after identifying the problem facing during the organization. Hence, awareness to overcome the problems can be made immediately.

The complete documentation is expected to reinforce the productivity among the staff and administrator to upgrading their performance to organize the effective of data collection. In facts, the documentation will encourage the positive value of group work in systematic procedure and increasing their competency with other organization.

## 1.9 Conclusion

From the initial study, it is found that Custommedia Sdn Bhd requires the Project Data Management that can improve in project communication, task delegation and performance monitoring.

Project management is the core processes for every software development; as such PDM will be the main process centre. Future development, such as integration with other functional area such as financial and Human Resources, that enables more timely and efficient data that can support in the organizational functions.

Web enable application enables the application to be assessing remotely. User will be able to communicate or update data at the sites. Hence there will be no lost of data over the time.

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