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Decision support system (DSS) canteen's tender system
for secondary schools in daerah Melaka Tengah / Faridah
Ridwan.

DECISION SUPPORT SYSTEM (DSS) CANTEEN'S TENDER SYSTEM FOR
SECONDARY SCHOOLS IN DAERAH MELAKA TENGAH

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MELAKA TENGAH

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Tarikh : 30 November 2006

DECLARATION

I hereby declare that this project report entitled

DECISION SUPPORT SYSTEM (DSS) CANTEEN'S TENDER FOR SECONDARY
SCHOOLS IN DAERAH MELAKA TENGAH

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

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DEDICATION

Specially dedicated to
My God, ALLAH SWT
My beloved family members who have
encouraged, guided and inspired me throughout my journey of education
All My Lecturers
My Supervisor, Puan Massila Kamalrudin
My best friend and my colleagues

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In the name of Allah the Almighty and most Merciful

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ABSTRACT

Decision Support System (DSS) Canteen's Tender for Secondary Schools in Daerah Melaka Tengah or known as CTS is an online system for tender decision making. The different of this system is it is based on DSS which is all the decision are making by the system itself. It's different with the manual method of decision making which is the decision are made by meeting between JPNM and school. The advantages of this system are to help to reduce time and wrong decision because it used the system totally as a decision maker by key in some information. In his system, the authorized customer can check their status, update the profile and register for the tender by online while for the admin, they acts as a person who manage /update customer status for the tender result, view all the customer information that beat for the tender and view all the customer that got the tender.

ABSTRAK

Decision Support System (DSS) Tender Kantin untuk Sekolah-sekolah Menengah Daerah Melaka Tengah atau dikenali sebagai CTS ialah system *online* untuk pemilihan tender bagi kantin sekolah. Perbezaan sistem ini ialah keputusan yang dibuat berdasarkan Decision Support System (DSS) iaitu keputusan pemilihan tender itu dilakukan oleh sistem itu sendiri. Ianya berbeza dengan cara manual untuk membuat keputusan dimana kebiasaannya keputusan dibuat dengan mesyuarat/perbincangan di antara pihak JPNM dan pihak sekolah. Kebaikan sistem ini ialah ianya membantu mengurangkan masa untuk membuat keputusan dan mengelakkan keputusan yang salah kerana semua keputusan dibuat sepenuhnya oleh sistem. Sistem ini bertindak sebagai pembuat keputusan dengan memasukkan maklumat-maklumat/syarat-syarat utama untuk mendapatkan tender tersebut. Terdapat dua pengguna yang boleh menggunakan sistem ini iaitu pelanggan dan pentadbir. Di dalam sistem ini, pelanggan yang sah boleh menyemak status mereka, mengubah atau mengemaskini profil mereka dan yang paling penting boleh mendaftar untuk tender ini secara *online*. Manakala pentadbir boleh menguruskan/ mengemaskini status pelanggan sama ada berjaya mendapatkan tender atau tidak dan melihat senarai pelanggan-pelanggan yang mendaftar untuk mendapatkan tender juga senarai pelanggan yang berjaya mendapat tender .

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CHAPTER I

INTRODUCTION

1.1 Project Background

Decision Support System or known as DSS are a specific class of computerized information system that supports business and organizational decision-making activities. A properly designed DSS is an interactive software-based system intended to help decision makers compile useful information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and make decisions. So basically in Finlay (1994) opinion “DSS is a computer-based system that aids the process of decision making”.

For nowadays there is still no system for canteens tenders that using system to make a decision who got the tender. Basically the tender selection is based on meeting between the presenter from involve schools and presenter for Jabatan Pendidikan Negeri Melaka (JPNM). This meeting was called “Open Tender Box”. In order to solve the problem, the project called “DSS Canteen Tender for Secondary School in Daerah Melaka Tengah (CTS)” is proposed for this PSM. This system is basically an intelligent system that can make a decision during tender selection. Other than that this system was online that easier for the customer to register for the tender by online, update/view their profile and check their status. For the admin, this system helps to update or do the maintenance such as add manage customer information (view/update) and decision module that made by the system.

1.2 Problem statement(s)

This is the new creation and there is no existing system for this project. The selections are done manually and basically the decisions are made through a meeting from both presenter (school and JPNM). The problem with the existing system is false decision during tender selection. For example the tender selection for some school is not basically on the requirements given but the schools give those tender to their family or their friends. This is unfair for certain people who also beat for the tender. Other than that there are many secondary schools in Daerah Melaka Tengah, so with this system JPNM management team can manage the schools smoothly and the school tender information can be saved in proper way.

1.3 Objective

1. Use Decision Support System (DSS) to do decision in the canteen tender selection to avoid bayous during canteen tender selection
2. To help Jabatan Pendidikan Negeri tender's management team to discover the best decision in canteen tender selection.
3. Help the customer to register and check their status by online.

1.4 Scopes

The target user for this system is JPNM tender's management team (admin) and the customer (user).

The admin:

- Login

Admin can log in to the system with the authentication IC number and password.

- Manage customer information

The admin will modify and update customer information only the status or the customer whether the customer get or did not get the tender. Other than that the admin can view the important information about the customer.

- The decision help module

To assist the school/JPNM in making the best decision in tender selection. Beside that the admin have to enter or key in the term and condition which are needed by the system. This is the main module where all the decision for the tender is done by the system.

The customer

- Login in to the system

Admin can log in to the system with the authentication IC number and password.

- Register for the tender

The customer can fill the registration form for the tender. The information fill will help the system to make the decision in tender selection.

- Check Status

Check status that helps the customer to check whether they got the tender or not.

- Update Profile

Where the customer can update/view their profile that which is the information is useful for the admin.

1.5 Project significance

The one that will get the benefits from this system is JPNM tender's management team because this system will help them to manage the tender management which is from the activities open the tender until the selection to going smoothly. This system also helps the selection team to make a selection so that the meeting that usually made to do the decision may not be held again. So the school will only wait for JPNM to tell them about the decision. This may help both of involving parties will reduce time for make selection and the selection that will be made is fair and in faster time. Other than that, CTS will help the admin to keep all the data about the tender, the schools and the customer in proper and in order way. From this system, JPNM can know how many people that beat from the tender.

1.6 Conclusion

In conclusion, Decision Support System or DSS is decision maker for a system. Basically in Malaysia DSS are rarely used because Malaysian always prefer to do manually which is organize a meeting and make a decision from the meeting. In this chapter the things that being discuss are project background, problems statements, project objectives, scopes and project significant. The project background is the introduction to the project in briefly explanation, problems statements is description about the problems that the user face with the current system, project objectives is list down the thing that we want to get from this system or why we build the system, while scopes are basically the specific user for the system and the modules that involved in this project. Lastly project significant is describe who/what may benefits from the project and how it going to give benefits to the users. The next activities to be developed will be the literature review and project methodology of the system

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

Literature review is an account of what has been published on a topic by accredited scholars and researchers. It is part of the introduction to an essay, research report, or thesis. The purpose in writing the literature review is to convey to your reader what knowledge and ideas have been established on a topic, and what their strengths and weaknesses are [2]. A literature review must be organized around and related directly to the thesis or research question that being developed, synthesize results into a summary of what is and is not known, identify areas of controversy in the literature and formulate questions that need further research

Project is a temporary endeavor undertaken to create a unique product or service. Thus, the end result sought may be distinct from the mission from the organization which undertakes it because the project specifically has a deadline and the endeavor is temporary [3]. While methodology is defined as a codified set of practices (sometimes accompanied by training materials, formal educational programs, worksheets, and diagramming tools) that may be repeatable carried out to produce software [4]. So project methodology predefines the process definition of a project such as outline the software

architecture of the subject, making risk assessment and the least-cost path to avoid unnecessary failures when a project is being developed.

2.2 Fact and finding

2.2.1 Definition of DSS

Sprague and Carlson give DSS definition as a system that has 5 main characteristics (Sprague et al., 1993) [5]:

1. System that based on computer
2. Being used to help decision-maker.
3. To solve a complicated problem that impossible to do with manual calculation.
4. Through simulation way that is interactive.
5. Where data and analysis model is a main component.

For Keen and Scott Morton (1978), DSS couple the intellectual resources of individuals with the capabilities of the computer to improve the quality of decisions ("DSS are computer-based support for management decision makers who are dealing with semi-structured problems"). For Sprague and Carlson (1982), DSS are "interactive computer-based systems that help decision makers utilize data and models to solve unstructured problems." On the other hand, Keen (1980) claims that it is impossible to give a precise definition including all the facets of the DSS ("there can be no definition of *decision support systems*, only of *decision support*"). Nevertheless, according to Power (1997), the term *decision support system*

remains a useful and inclusive term for many types of information systems that support decision making. He humorously adds that every time a computerized system is not an on-line transaction processing system (OLTP), someone will be tempted to call it a DSS [6].

According to Keen and Scott Morton (1978), the concept of decision support has evolved from two main areas of research: the theoretical studies of organizational decision making done at the Carnegie Institute of Technology during the late 1950s and early 1960s, and the technical work on interactive computer systems, mainly carried out at the Massachusetts Institute of Technology in the 1960s. It is considered that the concept of DSS became an area of research of its own in the middle of the 1970s, before gaining in intensity during the 1980s. In the middle and late 1980s, executive information systems (EIS), group decision support systems (GDSS), and organizational decision support systems (ODSS) evolved from the single user and model-oriented DSS. Beginning in about 1990, data warehousing and on-line analytical processing (OLAP) began broadening the realm of DSS. As the turn of the millennium approached, new Web-based analytical applications were introduced [7].

2.2.2 Existing System

The existing system for tender selection is based on manual selection. Firstly when the school needs someone to run the canteen, representer from the school will tell Jabatan Pendidikan Negeri Melaka (JPNM) about that problem. JPNM will open the tender to people that want to beat for the open tender. The customer will send the application form to school. The form will put inside box that called by "Tender Box". When the date for the open tender is closed, the

presenter from the schools will sent the “Tender Box” to the JPNM. At JPNM a meeting will be held. The meeting is between the presenter from the school and presenter from JPNM. The meeting held to open the “Tender Box” and make a selection whose get the tender. This system is same for all schools in Malacca whether primary, secondary or other types of schools. When the selection had been made the customer who got the tender will be told by letter. For the customer they got to go to the school and buy the tender form.

2.2.3 Example of DSS system implementation

2.2.2.1 The PlanIT Online Project: A Web-Based Work Transition Decision Support System for Persons with Disabilities

This project is about designing and implementing a web-based decision support system called PlanIT Online. The system was intended to be comprehensible for advocate group for persons with disabilities and provides information about work incentives and benefits from social employment policies of federal and state governments. PlanIT Online will encourage people with disabilities to enter the workforce and supports their decision making process. This employment-based solution will result in higher net income, raise self-esteem and improve the quality of life for the people with disabilities. The system also includes integrative and non-conflicted models that are related to disability policies and programs. These models define roles for agencies and department within federal and state governments, social and technical infrastructure [8].