

BORANG PENGESAHAN STATUS TESIS[^]

Y.SON.COM HELPDESK TICKETING SYSTEM

JUDUL: _____

SESI PENGAJIAN: 2006

Saya TAN EE DAWN

(HURUF BESAR)

mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis dan projek adalah hakmilik Kolej Universiti Teknikal Kebangsaan Malaysia.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** Sila tandakan (/)

_____ SULIT (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)

/ _____ TERHAD (Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)

_____ TIDAK TERHAD

(TANDATANGAN PENULIS)

Alamat tetap : 3, LRG NAKHODA 1,

TMN TELUK AIR TAWAR, 13050 B'WORTH.

Tarikh : 20 HB NOV 2006

(TANDATANGAN PENYELIA)

NURIDAWATI BT MUSTAFA

Nama Penyelia

Tarikh : _____

CATATAN: ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.

[^] Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

raf

QA76.9.D26 .T36 2006



0000038173

Y.Son.Com helpdesk ticketing system / Tan Ee Dawn.

Y.SON.COM HELPDESK TICKETING SYSTEM

TAN EE DAWN


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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2006

DECLARATION

I hereby declare that this project report entitled
Y.SON.COM HELPDESK TICKETING SYSTEM

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

STUDENT : 
(TAN EE DAWN)

Date: 22/11/06

SUPERVISOR : 
(MISS NURIDAWATI BT MUSTAFA)

Date: 22/11/06

ABSTRACT

The purpose of this report is to document the processes involved during developing the “*Y.SON.COM HELPDESK TICKETING SYSTEM*”. This report discusses the background of current system and the problem faced with the current system, scopes, objective and project significant for the new helpdesk ticketing system in chapter 1. This report also concentrates the literature review which discusses the planning and methodology in Chapter 2. By using the database life cycle methodology, the method requires the stated of the selection on database management system to support the requirement of the new system.

In Chapter 3 the report explain the analysis phase, with deliverables of problems analysis result for the current system and data flow diagram for the whole new system. In Chapter 4 the report explains the system high-level design of the entire system which included the user interface design, navigation design, input and output design and database design in logical and conceptual database design. In Chapter 5, the report explains the Implementation Status of the system. System implementation phase focus on the construction and implementation process to deliver the final system into operation. In Chapter 6, the reports talks about Testing on the system. Software testing is the process of executing a software system to determine whether it matches its specification and executes in its intended environment

ABSTRAK

Tujuan laporan ini adalah untuk mendokumentasikan proses yang terbabit dalam pembangunan "*Y.SON.COM HELPDESK TICKETING SYSTEM*". Laporan ini membincangkan latar belakang sistem yang sedia ada dan menetapkan skop, objective, dan kepentingan sistem baru yang dicadangkan dan masalah – masalah yang dihadapi dengan system l yang sedia ada sekarang dalam Bab 1. Laporan ini kemudian memberi tumpuan kepada bahagian kajian literature yang akan membincangkan perancangan dan kaedah yang akan digunakan dalam pembangunan sistem ini. Dengan kegunaan kaedah litar hayat pangkalan data, sistem pengurusan pangkalan data perlu ditetapkan supaya data menampung kegunaan keperluan sistem baru.

Dalam Bab 3, laporan ini akan menerangkan bagaimana projek ini akan dianalisa dengan adanya hasil daripada analisa masalah-masalah yang sudah didapati dari sistem yang sedia ada dan menghasilkan gambarajah aliran data. Bab 4 akan merangkumi rekabentuk keseluruhan sistem yang akan dibangunkan dan sistem yang dicadangkan dengan pnghasilan rekabentuk interface pengguna. Rekabentuk aliran system, rekabentuk input dan output dan rekabentuk pangkalan data dalam rekabentuk pangkalan data logikal dan conceptual. Analisa dalam peraturan jalan kerja dalam departmen helpdesk memberi penaghasilan gambarajah perhubungan entity. Proses normalization dilakukan supaya mendapat struktur pangkalan data yang baik tanpa ada penindasan data. Bab 5 menjelaskan status implementasi untuk system yang dibangunkan. Fasa ini memberi penekanan pada pembangunan dan proses implementasi untuk menghasilkan sistem yang berfungsi. Dalam Bab 6, laporan ini menekankan proses pengujian terhadap sistem yang dibangunkan. Pengujian sistem ini menrangkumi penentuan sama ada sistem ini menepati spesifikasi and berfungsi dalam keadaan yang tersedia.

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	TITLE	i
	DECLARATION	ii
	ABSTRACT	iii
	ABSTRAK	iv
	TABLE OF CONTENTS	v
	LIST OF TABLE	viii
	LIST OF FIGURE	xi
CHAPTER I	INTRODUCTION	
	1.1 Project Background	1
	1.2 Problem Statement	3
	1.3 Objective	5
	1.4 Scopes	6
	1.5 Project Significant	7
	1.6 Conclusion	8
CHAPTER II	LITERATURE REVIEW AND PROJECT METHODOLOGY	
	2.1 Introduction	9
	2.2 Fact and Finding	10
	2.2.1 The Importance of Generating Report	10
	2.2.2 The Importance of DBMS	11
	2.2.2.1 Libeum Ticketing System	11
	2.2.2.2 Selection DBMS	12
	2.2.3 The importance of Web Based Application	14
	2.3 Project Methodology	16
	2.4 Project Requirement	19
	2.4.1 Software Requirement	19
	2.4.2 Hardware Requirement	19

	2.4.3 Other Requirement	20
	2.5 Project Schedule and Milestone	20
	2.6 Conclusion	22
CHAPTER III	ANALYSIS	
	3.1 Introduction	23
	3.2 Problem Analysis	24
	3.2.1 Analysis on Current System	27
	3.2.2 Identified Problems	37
	3.2.2.1 Graphical Charting Features	37
	3.2.2.2 Email Notification Features	40
	3.3 Requirement Analysis	41
	3.3.2 Data Flow Diagram Level 0	43
	3.3.3 Existing Data In System	46
	3.3.4 The Required Data	48
	3.3.5 The Software Requirement	49
	3.3.6 The Hardware Requirement	50
	3.3.7 The Network Requirement	51
	3.4 Conclusion	52
CHAPTER IV	DESIGN	
	4.1 Introduction	53
	4.2 High-Level Design	54
	4.2.1 System Architecture	54
	4.2.2 User Interface Design	56
	4.2.2.1 Navigation Design	70
	4.2.2.2 Input Design	72
	4.2.2.3 Output Design	74
	4.3 Conceptual and Logical Database Design	77
	4.3.1 Conceptual Database Design	77
	4.3.2 Logical Database Design	79
	4.3.3 Database Management System Selection	83
	4.4 Detailed Design	84
	4.4.1 Software Specification	84
	4.4.2 Physical Database Design	104
	4.5 Conclusion	112
CHAPTER V	IMPLEMENTATION	
	5.1 Introduction	113
	5.2 Software Development Environment Setup	114
	5.3 Database Implementation	115
	5.3.1 Sample Of Database Access	117
	5.4 Software Configuration Management	120

	5.4.1	Configuration environment setup	122
	5.4.2	Version Control Procedure	126
	5.5	Implementation Status	127
	5.6	Conclusion	128
CHAPTER VI	TESTING		
	6.1	Introduction	129
	6.2	Test Plan	130
	6.2.1	Test Organization	130
	6.2.2	Test Environment	131
	6.2.3	Test Schedule	132
	6.3	Test Strategy	133
	6.3.1	White-box Testing	133
	6.3.2	Black-box Testing	134
	6.3.3	Classes of Tests	136
	6.4	Test Design	136
	6.4.1	Test Description	136
	6.4.2	Test Data	137
	6.5	Test Results and Analysis	137
	6.6	Conclusion	138
CHAPTER VII	PROJECT CONCLUSION		
	7.1	Observation on Weaknesses and Strengths	150
	7.1.1	Strengths	151
	7.1.2	Weaknesses	151
	7.2	Proposition for Improvement	152
	7.3	Contribution	153
	7.4	Conclusion	153
Reference			
Appendices			

LIST OF TABLES

TABLES	TITLE	PAGE
2.1	The Project Time Line Table	21
3.1	Description of Attribute User Table	46
3.2	Description of Attribute Ticket Table	47
3.3	Description of Attribute System Table	48
3.4	Description of Attribute Employee Table	48
3.5	Description of Attribute Support Table	49
3.6	Description of Attribute Log Table	49
4.1	Input Design	72
4.2	Output Design	75
4.3	Data Dictionary for New Helpdesk System	82
4.4	Login Page and Create Ticket Input Table	88
4.5	Login Page and Create ticket output Table	88
4.6	Ticket Progress Input Table	90
4.7	Ticket Progress Output Table	90
4.8	Close Ticket Input Table	92
4.9	Close Ticket Output Table	92
4.10	Email Auto-notification Input Table	93
4.11	Email Auto-notification Output Table	93
4.12	Email Input Table	94
4.13	Email Output Table	94

4.14	Report Input Table	94
4.15	Report Output Table	97
4.16	Add New Category and Location Input Table	99
4.17	Add New Category and Location Output Table	100
4.18	Add New User and Delete User Input Table	103
4.19	Add New User and Delete User Output Table	103
5.1	Implementation Status Table	129
6.1	Test Organization Table	132
6.2	Test Facilities Table	133
6.3	Test Schedule Table	134
6.4	Classes of Tests by Strategy Table	138

LIST OF FIGURES

FIGURES	TITLE	PAGE
3.1	Flow Chart Diagram For The Current System	25
3.2	Helpdesk Component	26
3.3	Context Diagram For The Current System	27
3.4	The Login Page	28
3.5	The Login Success Page	28
3.6	The End User Details Page	29
3.7	The Case Details Page (Part 1)	29
3.8	The Case Details Page (Part 2)	30
3.9	The Ticket Created Page	30
3.10	The Search Ticket Details Page	30
3.11	The Unassigned Ticket Page	31
3.12	Update Ticket Page	31
3.13	Assigned Ticket List Page	32
3.14	End User Check Ticket Page	32
3.15	User Maintenance Page	33
3.16	The Add New User Details Page	33
3.17	Location List Page	34
3.18	The Adding New Location Page	34
3.19	Category Maintenance Page	35
3.20	The Adding New Category Page	35
3.21	The Changing Password Page	36
3.22	The Logout Page	36

3.23	The Download Ticket Info page	36
3.24	Number of Ticket Created by Priority	38
3.25	Numbers of Ticket Created by Priority and by Plant	38
3.26	Number of Ticket Created by Category	39
3.27	Sub Category for Every Field Related	39
3.28	Breach ticket of the Month	
3.29	Enhancements Helpdesk Ticketing System Context Diagram	42
3.30	Enhancements Helpdesk Ticketing System Level 0 DFD	43
3.31	Process One Data Flow Diagram Level 1	44
3.32	Process Two Data Flow Diagram Level 0	44
3.33	Process Three Data Flow Diagram Level 0	45
4.1	4.1 System Structure in a Local Area Network	55
4.2	Interior System Structure in Layer Model	55
4.3	Log In Interface	56
4.4	Welcome Interface	56
4.5	Create Ticket Interface	57
4.6	Log Problems Interface	58
4.7	Search Ticket Interface	59
4.8	Update Ticket Interface	60
4.9	Close Ticket Interface	61
4.10	User Menu Interface	62
4.11	Change Password Interface	62
4.12	User Menu Interface	63
4.13	Administrator Menu Interface	64
4.14	Add New Category Interface	65
4.15	Add New Location Interface	65
4.16	Add New User Interface	66
4.17	Delete User Interface	66

4.18	Number of Ticket Created By Priority Interface	67
4.19	Number of Ticket Created By Priority and By Plant Interface	67
4.20	Number of Ticket Created By Category Interface	68
4.21	Number of Ticket Created By Sub Category for Every Related Field Interface	68
4.22	Number of Breach Ticket By Month Interface	69
4.23	Log Out System Interface	69
4.24	Navigation Flow	71
4.25	Extended Entity Relationship Diagram	78
4.26	Third Normal Form for Table Log	79
4.27	Third Normal Form for Table Employee	80
4.28	Third Normal Form for Table Category	80
4.29	Third Normal Form for Table Location	80
4.30	Second Normal Form for Table Ticket	81
4.31	Third Normal Form for Table Ticket with Table Support	81
4.33	Login Page	86
4.34	Login Failed Page	86
4.35	Create Ticket Page	87
4.36	Invalid Ticket Number Page	87
4.37	Create Ticket Page with Problem Details	87
4.38	Blank Statement Detected Page	88
4.39	Ticket Progress Page	89
4.40	Invalid Ticket Number Page	90
4.41	Close Ticket Page	91
4.42	Confirm Close Ticket Page	92
4.43	Report Number of Ticket by Priority Page	96
4.44	Report Number of Ticket by Priority and By Plant Page	96
4.45	Report Number of Ticket by Category Page	96

4.46	Report Number of Breach Ticket	97
4.47	Add New Category page	99
4.48	Add New Location page	99
4.49	Add New User Page	102
4.50	Delete User page	102
4.51	Confirm Delete User page	102
4.52	Confirm Log Out page	103
5.1	Overview of software development and hardware environment for Patient Information System	116
5.2	MySQL Administrator Login Interface	117
5.3	MySQL Start/Stop Service Interface	117
5.4	Server Status Interface	118
5.5	Sample Output for Listing Query	120
5.6	The MySQL Server Instance Configuration Wizard First Interface	122
5.7	Reconfigure or Remove Instance	123
5.8	Detailed Configurations or Standard Configuration	123
5.9	Types of Machine	124
5.10	Database Usage	124
5.11	Table spaces Setting	125
5.12	Numbers of concurrent connection to the server	125
5.13	Networking Option	126
5.14	Character Set Setting	126
5.15	Windows Option	126
5.16	Security Option	127
5.17	Ready to Execute	127

CHAPTER I

INTRODUCTION

1.1 Project background

Y.son.com Sdn. Bhd. is the current leading Computer Hardware Company in the region. Y.son.com Sdn. Bhd. has few branches in Penang located at :

- Plant 1, Prai Industri Park
- Plant 2, Bukit Minyak Industrial Park
- Plant 3, Bukit Mertajam
- Plant 5, Seberang Perai Tengah

Y.son.com Sdn Bhd has around 500 end users. Majority of the users are end users that not good in computers they are trained to use applications such as Microsoft Applications and In-house developed applications. Users are facing some difficulties to contact IT personnel to report their problems and to get their problems fix.

The common problems faced by the users can be categorized as Hardware Problem. Hardware problems usually occur when a change is made to the current configuration by adding new hardware or upgrading the existing equipment. The other common problems are software problem, network problem, telecommunication problem, problem with using an In-house developed application.

This proposed system is the enhancement for the current helpdesk ticketing system. In general, Helpdesk is defined as a single point of contact in an organization that provides support to individuals who use technology to perform their job. Without a helpdesk, employee would not know where to take their technology related problems. They might for example ask their coworker in their department. If the person did not know the answer, a second call might be made.

With a systematic helpdesk in place only one contact is required and the person experiencing problem knows exactly where to go for help. Helpdesk ticketing system is also system where users can call to record their problem in the system and the user will get a ticket number for the problem reported.

This ticket numbers can be used by the user for following up purpose and tracking purpose. For the IT Department staffs this system will allow all of them to view all the problems reported and they can pick the ticket and solve the problem. The main module of the helpdesk ticketing system is to increase the efficiency of the IT staffs and to reduce the delay to the user to report the problem and to get their problem solved.

The enhancement part for this system is to help the leader of the helpdesk to generate monthly report with graphical representation such as bar chart and line graph easily. On behalf of the enhancement for Y.son.com Sdn. Bhd. the module that has to be developing is the email notification module to auto alert the support group.

In the current system the user will call a helpdesk number and the helpdesk operators will answer their calls. The helpdesk operators will listen to the end user problem and try to solve it through the telephone. If the helpdesk operator manages to solve the problem then he or she will create a ticket and close it on the spot. This will be considered as first call resolution. If the helpdesk operator is unable to solve the problem through the telephone he or she then will log this case into the system and generate a ticket number for the user with the priority level. This ticket will be assigned to the

respective group and the owner of the group will then distribute these tickets to his subordinates to solve. Each ticket will be created with a priority level.

In the proposed system, the leader of helpdesk operators needs to generate the monthly report to see whether the onsite engineers can perform well where their performance can be evaluated by tracking each of the tickets closely to ensure all the tickets have been resolved within the specified time frame given.

The report also is to show the helpdesk ticket analysis of month. The analysis included helpdesk ticket summary, helpdesk call report, numbers of tickets created by priority, numbers of tickets created by priority and by plant, number of tickets created by category, and sub category for every field related.

1.2 Problem statement

The proposed enhancement system is to help the helpdesk operator to assign the job task to the related support group by email alert. For the current system of Y.son.com Sdn. Bhd, the helpdesk operator created the ticket, and the job task only been captured in the internal system without alerting the support group.

If the support person do not log in to the system, they will never know there is a task waiting for them. By the time passing, the ticket might be suspended not because of technical problems, but because of the attitude of the support person if they purposely not to log in to the system and ignore the responsibility. This clearly shows that the efficiency and the productivity of the user is degrading because of the weak IT structure in solving user problem.

If the helpdesk operators have been chasing by the end users to solve their problems, the helpdesk operator might call to the onsite support group where by the

support person never log in to the system. During this stage few things must be considered: -

- When will the helpdesk operator call onsite support group?
- Will helpdesk operator really call onsite support group?
- How can the helpdesk operator prove that he or she have called the support group?
- Will helpdesk operator be able to call onsite support group?

All the consideration above shows that if the helpdesk operators delays the escalation process the end user need to wait until the onsite gets there. The onsite support person would reach at end user location maybe after 3 hours because he was attending a different problem, which might not be reported to the helpdesk system. This is because their leader does not have any data to know what his subordinates are doing. All the tickets assigned by the leader, will then be recorded by the leader and the onsite support person to produce monthly report to the management.

If the recording is not done properly, this will affect the performance of the onsite. During this stage, problems come again. The monthly report is completed by manually referring to the current system generated excel spreadsheet for any query in the system. By using the excel spreadsheet, the helpdesk operator leader need to manually analysis the ticket and generated the report from the excel spreadsheets and the data collection from the onsite support group.

There is no standard reporting format. Reports are currently typed using excel before being presented to management Whenever come to the part manually done a report, the problems such as, human attitude problems may arise. The manager might consider how “true” is the numbers showing from the report?

In this proposed system, the web based system will automate to generate the report and showing the charting for each analysis field that required. The analysis included helpdesk ticket summary, helpdesk call report, numbers of ticket created by priority, numbers of ticket created by priority and by plant, number of ticket created by category, and sub category for every field related.

1.3 Objective

The main objective of this system is:-

- To have a single point of contact for the users to call when they face a problem which is related to IT services.
- To provide a case/ticket number to the end user upon logging a case into the helpdesk system. This ticket numbers can be used by the end user and the IT personnel for tracking purpose.
- To assign the ticket created by the users to the correct support group by email. Which will allow the support group personnel's to directly pick up the problem ticket.
- To perform a good managerial lever on job assignment to the support group person with email notification features.
- To generate monthly report in various type such as user usage report and also report on analysis in any criteria input by the user.
- To generate the graphical representation report such as bar chart or line chart. Based on the analysis of thicket by numbers of ticket created by priority and by plant, number of ticket created by category, and sub category for every field related.

1.4 Scopes

This is the enhancement of web based Helpdesk System from Y.son.com Sdn. Bhd. where user can access via network. The current system has the features of creating and keeps tracking ticket. The intelligent of the proposed system is to auto generate email to assign job task to technician.

The helpdesk operators need to key in simple input to allow the system to keep track all the tickets in DBMS. After a data collection have been done for all the tickets' analysis in a period of time, a report will be generated based on the requirement that user provided.

The specific users for this system are:-

- Helpdesk Operator
- IT support group leader
- Helpdesk Manager
- IT Manager
- IT Director

The modules that will include in the helpdesk ticketing system are:

- a) The enhanced module :
 - i. Report in graphical representation
 - ii. E-mail notification
- b) The current and remain module:
 - i. Create ticket
 - ii. Search ticket
 - iii. Assign ticket
 - iv. User management
 - v. Reporting in excel spreadsheet file type

The project approach is referring to database life cycle approach. Bottom-up design where by to identify the data elements as the items and then groups them together in data sets. The database attributes has been getting from the studies of the current system, and then built the entities by grouping them together.

The constraint and boundaries to be concluded in this enhanced system is, the proposed system will only running perfectly in the intranet environment, but not to expose to the internet. The licensing and agreement will be only own by Y.son.com.Sdn. Bhd. This system will only specific for the use of the company.

This system can be run perfectly on the Windows XP professional services pack 2, with Internet explorer 6.0 installed. The modem for each personal computer to be log in to the system is minimum 56 kbs. The minimum specification for each personal computer is complete with Pentium 3 1.0 GHz processor, 128 MB RAM and 30 GB hard disk drive.

1.5 Project significance

This helpdesk system will ease the end users to get a single point of contact when they encounter problem related to IT services. The service in IT will be fast and effective with this system with minimum of human attitude mistake.

Each support person will be alerted via email by the enhanced helpdesk system or by default can log in the system to check whether they have any tickets of waiting task or not. This eliminates the time taken for the helpdesk operators who got to call to find the correct support person to attend the problem and solve it within the time frame.

The helpdesk system also enables the support group leader to track their technician's performance and workload. This enhanced system will have the capability to generate a report which is consistent and accurate and with a powerful DBMS in

analyzing the tickets based on any criteria and will provide the charting to be view immediately.

This feature is to help the helpdesk leader to present the monthly report on the spot without the need of analyzing the tickets manually from the excel spreadsheets which can be download from the current system. This may save more time for the helpdesk leader and the report that generated are more reliable by minimize the human mistake or attitude issues.

1.6 Conclusion

This chapter gives an overall summary of what system is being proposed. The topics covered in this chapter includes introduction of the current system with the enhancement, objective of the system, problem faced in the current system and the scope of the system. The current system created a single contact point for the End users. End users which call helpdesk to log a case will be given a ticket number for future reference.

The ticket created will be transferred by email to the correct workgroup in the enhanced system based on the problem reported by the end users. Each support group leader will then view and pick the ticket and distribute via email to the support person to solve the problem. Once the problem is closed the ticket will be closed.

This enhanced system will have the capability to generate a reports based on user requirement which is consistent and accurate and with a powerful DBMS in analyzing the tickets and will provide the charting to be view immediately.

By implementing the enhanced system the current ways problems can be overcome which is more effective and efficient with minimizing the human attitude problems and mistake.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

A literature review is an account of what has been published on a topic by accredited scholars and researchers. The purpose of writing this literature review is to show that what knowledge and ideas have been established on helpdesk ticketing system, and what the strengths and weaknesses are that found in the resources.

The resources on the topic of helpdesk ticketing system have been widely published. Every huge company in the world wide needing this system to be help the company run in the smooth way. Generally the helpdesk ticketing system is familiar in the industry. The several existing system will be reviewed and compared. The information collection for the literature review on helpdesk ticketing system is from many resources, which are in e-book and published documentation such as whitepaper and journal in web site.

A project methodology is a set of guidelines for designing a database for student majoring in Database Management. In this project, DBLC (database life cycle) is the main methodology that using. By referring in many resources about the DBLC, and has

the conclusion in derive the phase in the best to bring successful in the project planning purposes.

2.2 Fact and Finding

Basically the fact and finding for this proposed system is based on the component that included in the helpdesk functionality. The main helpdesk components are: First, the helpdesk management lever person-this group of person refers to helpdesk system to have the information on the problems solving quantitative metrics. Second, the helpdesk operators are the group of person play and important role in using the system to log a ticket. Third, the support group person is the group of person performs based to the ticket that assigned from the system. Forth, the end users call to the helpdesk call center to report problems. Lastly, the helpdesk system which is the most functional features to help the helpdesk department run smoothly

2.2.1 The Importance of Generating Report

Based on the studies on whitepaper written by Andrew (2001), an effective helpdesk application should be included the powerful scripting and scheduling suite to provide effective unattended reporting and diagnostics. From the statement we realize that how important is a helpdesk ticketing system if that helpdesk ticketing system can produce a reliable report and will be in the scheduled period.

A support group needs some way to determine success or failure of problem solving and support methods. This is seldom an easy task because it can be largely subjective. While qualitative information is a more useful indicator of the success of the support organization, it is more difficult to get. Many organizations collect quantitative metrics, which are fairly easy to collect, but can prove about the quality of an