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Maintenance and analysis of data for gems indicators /
Nurul Iza Ismail.

MAINTENANCE AND ANALYSIS OF DATA FOR GEMS INDICATORS

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This report is submitted in partial fulfillment of the requirements for the
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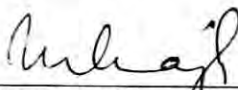
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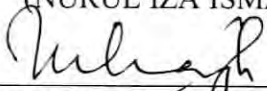
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DEDICATION

Firstly, I want to thanks to ALLAH S.W.T because gives me the chance to further my study at Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM). My special thanks to my family for their support for me to continue my study in this university. Also my special thanks to Mr. Ivan Ho Sek (manager of Manufacturing Service Desk at Intel Penang) and all employees there for being very generous and kind to give me the permission to do my PSM in this department. I would also like to extend my sincere gratitude and appreciation to my PSM supervisor from the Faculty of Information and Communication Technology, Prof Madya Norhaziah Bt Md Salleh, who has guided and encouraged me during my PSM. Last but not least, I wish to say thank you to all the friends that I have met at Intel Technology Sdn. Bhd for their friendship and company, and all family members for their support.

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ABSTRACT

Maintenance and Analysis of Data for Gems Indicators is one web base application that is developed for Intel Technology Sdn.Bhd (Manufacturing Service Desk Department) that uses the Microsoft SQL Server 2000 for their database, and the Active Server Page (ASP), and Visual Basic (VB) code for maintenance and analysis of data for Gems Indicator. This project starts from the Planning Phase and then on to the Analysis Phase, Design Phase, Implementation Phase and Testing Phase.

This project is to display information from the Intel database and displays it in graph form. It is like an analyst the data in the database and represent it in graph. Intel needs this project because they, as to date, do not have a web site that can manage their data and analyze it before it can be viewed in graphs. Intel only uses the graph in the Excel program which can create some problems. Thus the reason why they have given me this project was to enable them to manipulate with this data.

This project will help them reduce the amount of time used when using the web site to view the graph. This method is also easily updated in the SQL because I created a stored procedure to select the fields that is needed when viewing the graph. This stored procedure will calculate the ticket volume and will be displayed in the web using the ASP and VB code. Therefore, if changes are necessary in future, all that is needed is to change the data in the stored procedure and the ASP code.

ABSTRAK

“Maintenance and Analysis of Data for Gems Indicators” merupakan sebuah aplikasi berasaskan web yang dibangunkan untuk Intel Technology Sdn. Bhd. khususnya bagi kegunaan Manufacturing Service Desk. Projek yang dibangunkan ini menggunakan Microsoft SQL Server 2000 sebagai database dan ActiveServer Page (ASP) dan Visual Basic (VB) sebagai bahasa pengaturcaraan. Projek ini bermula dari fasa perancangan, fasa analisa, fasa perangkaan, fasa perlaksanaan, dan fasa pengujian.

Projek ini akan menggunakan data daripada database Intel dan memaparkan data tersebut di dalam bentuk graf. Data tersebut akan dianalisa terlebih dahulu sebelum dipaparkan. Intel memerlukan projek ini kerana Intel tidak mempunyai sebuah system berasaskan web yang dapat menguruskan data dengan sistematik dan menganalisa data sebelum dipaparkan di dalam graf. Kaedah yang digunapakai sekarang adalah menggunakan Microsoft Excel 2003.

Dengan penghasilan sistem baru ini, diharap dapat mengurangkan pembaziran waktu. Selain daripada cepat, sistem ini lebih sistematik dan proaktif. Proses menganalisa data dibuat di dalam “stored procedure”. Ini memudahkan pengubahsuaian dilakukan sekiranya berlaku perubahan di masa akan datang. “Stored procedure” ini akan di gunapakai untuk mengira jumlah tiket bagi setiap kategori. Kod ASP dan VB akan di guna untuk memaparkan graf yang di kehendaki di dalam web.

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LIST OF ABBREVIATIONS

ABBREVIATIONS	TITLE
ASP	Active Server Page
ASTS	Application Support Tracking System
AZ	Arizona
ATM	Assembly Test Manufacturing
ATD	Assembly Test Design
ACT	Analyst & Control Technology
CSS	Cascading Style Sheet
CSD	Corporate Strategic Discussion
CR	Costa Rica
CAS	L3 support in lines down situation
DBA	Database Administrator
DBLC	Database Life Cycle
DBMS	Database Management System
DTS	Data Transformation Services
DFD	Data Flow Diagram
GEMS	Global Event Management Systems
ERD	Entity Relational Database
E-R	Entity Relational
EERD	Extended Entity Relational Database
FAQ	Frequently Ask Question
FTMK	Faculty Information Technology

	And Communication
GCC	Global Contact Central
GUI	Guide User Interface
HTML	Hyper Text Markup Language
IC	Integrated Circuit
IIS	Internet Information Server
IT	Information Technology
IS	Israil
IR	Ireland
IMO	Intel Mask Operations
JER	Jerman
KUTKM	Kolej Universiti Teknikal Kebangsaan Malaysia
KT	Kiah Tong Ng
KM	Kulim
LAN	Local Area Network
MEMS	Micro-Electromechanical Systems
MSD	Manufacturing Service Desk
Ms	Microsoft
T-SQL	Programming Language/ Structural Query Language
OOAD	Object Oriented Analysis and Design
OOP	Object Oriented Programming
ORG	Organization
OWC	Object Web Component
PC	Personal Computer
PG	Penang
PD	Pudong
PSM	Projek Sarjana Muda

SDLC	System Development Life Cycle
SOR	Statement of Requirements
SQL	Structural Query Language
SH	Shanghai
SLRP	Strategic Long Range Planning
SV	Switzerland
SMTD	Systems Manufacturing Technology Development
TAC	Technical Analyst Support
UML	Unified Markup Language
UI	User Interface
VB	Visual Basic
WW	World Week
WWW	World Wide Web
XML	Extensible Markup Language

CHAPTER I

INTRODUCTION

1.1 Overview

In this new era, Information Technology (IT) brings tremendous change in the corporate field which makes IT as a sophisticated platform to spread the latest information.

Manufacturing Service Desk (MSD) is one of the departments at Intel Technology Sdn Bhd that is involved with customer complaints and problems. The customers complain through telephone calls to Technical Analyst Support (TAC). TAC will save the complaints in a database named GemsDB. The customers' problems are about networking, computer components such as wafer, CPU, microprocessor, and another problems. There are many levels in this department. When TAC fails to settle a problem, it will pass it to another level and all the data will be recorded in Gems database. Currently, the complaints can only be saved or deleted from the database. All modifications to data must be done directly in the database.

The manager of this department analyses data & represents it in a graph. The analysis include business group, business site, platform, and shift.

1.2 Problem Statements

MSD is one of the departments at Intel that deals with customer problems and tries to solve them. All the customer records will be saved in the database named GemsDB. Those who are using this data need to analyze and represent the report in line graphs. What they need to analyze is the volume and resolution for business groups, volume for sites, volume for shifts, and volume for platforms. Before they can analyze the data, the Shift Manager needs to calculate the work shift. There are nine (9) problems which have been identified:

- i) **MSD does not have an online web site for Gems Indicators**
MSD department does not have an online web based application for Gems Indicators that can publicize the line graph for volume by business groups, resolution by business groups, volume by sites, volume by shifts, and volume by platforms.
- ii) **Data is not updated**
The current process uses Microsoft Excel 2003 file as their database to save all the data from Gems server and view the graphs using this software. The problems occur when the data in Microsoft Excel 2003 cannot be updated directly from the server so they can only view the graph for static data in Microsoft Excel 2003.
- iii) **Waste of time**
In Microsoft Excel 2003, they need to convert the data from the server into this software before they can create a macro to calculate shift and volume. The real data is in Microsoft SQL Server, so it will be a waste of time if the process involves many different kinds of software before they can view the graph
- iv) **Unable to view the latest or past year data**