

**OPERATION MANAGEMENT SYSTEM FOR SECURITY DEPARTMENT  
OF UNIVERSITI TEKNOLOGI MALAYSIA (OMS-UTMSD)**

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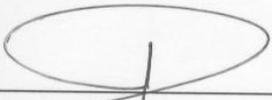
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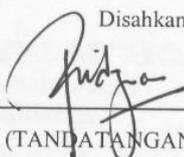
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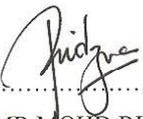
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**OPERATION MANAGEMENT SYSTEM FOR SECURITY DEPARTMENT  
OF UNIVERSITI TEKNOLOGI MALAYSIA (OMS-UTMSD)**

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A technical report is submitted in partial fulfillment of the requirements for the  
award of  
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Centre for Advanced Software Engineering  
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OCTOBER 2007

## DECLARATION

"I declare that this Technical Report entitled '*Operation Management System for Security Department of Universiti Teknologi Malaysia (OMS-UTMSD)*' is the result of my own research except for citations that have been dully acknowledged".

Signature



Name of Candidate : MOHAMED. O. ALI ALFALET

Date : 4 OCTOBER 2007

To my beloved parents, my wife, my kids Fatam, Rodane and Rawasi

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## ABSTRACT

Security Department of Universiti Teknologi Malaysia, City Campus, Kuala Lumpur is an important unit that ensures the security and safety of the institution. The department currently uses a poorly created web-based application to handle its daily tasks of surveillance, security checks and movement control. Therefore, a new system is necessary to enhance the security operations. This project developed an Operation Management System (OMS-UTMSD) with appropriate Software Engineering practice, complete with Software Requirement Specification (SRS) and Software Design Description (SDD). This project employed the Institute of Electrical and Electronics Engineering (IEEE) standards to meet the project's objective of refining the old version to coincide with current quality requirements. This web-based application was found to be suitable for addressing most manual daily tasks. The system was reengineered to comply with Software Engineering rules the final outcome satisfies all users' requirements, and suited to security management of staff, students, contractors and visitors. The system is capable of working round the clock (24 hours a day, 7 days a week). It now forms the backbone of the department for the generation and management of most security functions online.

## ABSTRAK

Jabatan Keselamatan, UTM bagi City Campus, Kuala Lumpur adalah sebuah unit penting yang mengawasi hal-ehwal keselamatan di utm city compus Pada masa ini jabatan tersebut menggunakan sebuah aplikasi sistem berasaskan web yang tidak teratur bagi melakukan kerja-kerja pemerhatian, pemeriksaan keselamatan serta kawalan pergerakan. Oleh itu sebuah sistem baru dibangunkan meningkatkan operasi keselamatan. Projek ini telah membangunkan Sistem Pengurusan Operasi (Operation Management System – OMS-UTMsd) yang berlandaskan kaedah pengamalan amalan terbaik, dilengkapi dengan dakutmer Spesifikasi Keperluan Perisian (SRS) dan Perincian Rekabentuk Perisan (SDD). prjek ini tersebut menggunakan piawaian Institut Elektrik dan Kejuteraan Elektronik (IEEE) bagi memenuhi objektif projek dan perminlaon kualiti semasa. Aplikasi web ini didapati sesuai bagi menyempurnakan kebanyakan tugas manual harian. Sistem terkini telah dijurterakon semula (re-engineered) serta dikompilkan sesuai dengan kaedah Kejuruteraan Perisian. hasil akhir projek ini memenuhi kesemua permintaan pengguna, disesuaikan untuk pihak staf, pelajar, kontraktor dan pelawat. Sistem ini berkebolehan untuk beroperasi sepenuh masa (24 jam sehari, 7 hari seminggu). Mulai sekarang sistem ini merupakan tulang belakang bagi jabatan tersebut dimana ianya akan menjana dan menguruskan kebanyakan fungsi keselamatannya secara atas talian.

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**LIST OF ACRONYMS**

CASE	Center For Advanced Software Engineering
®	Trade Mark
DFD	Data Flow Diagram
E	Engineering
GUI	Graphical User Interface
HTML	Hypertext Markup Language
IDE	Development Environment
OMS	Operation Management System
OOM	Object-Oriented Methodology
PHP	Hypertext Processor
QA	Quality Assurance
R & D	Research And Development
RS	Rational Rose
RUP	Rational Unified Process
SDD	Software Design Description
SDLC	software development life cycle
SE	Software Engineering
SRS	Software Requirement Specification
UML	Unified Modeling Language
UTMSD	Universiti Teknologi Malaysia Security Department

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Organization Background**

Since its establishment Universiti Teknologi Malaysia (UTM) focused on developing and improving its academic programs in the area of natural sciences and technology in the country. It contributes in research and development at both domestic and industrial scales. UTM is globally acknowledged for advancing the frontiers of human development industrially and commercially.

The university aims at producing capable men and women that would lead the society to greater height technically and scientifically. This is done through a variety of academic programs suitable for individual desires and aspirations.

UTM security department currently operates on staff strength of about 46 people, and is located on Kuala Lumpur Campus, which established was in 1975. The online system provides the department with steady growth and enhanced work efficiency.

## **1.2 Project Background**

OMS-UTMSD is an online system that will be used by the security department to monitor students, staff, contractors and visitors.movement It secures via surveillance of all other departments and schools in their jurisdiction (area of operation) remotely and physically. So building this online system will help in enhancing its efficiency of work and change its business process from manual to digital.

To enhance the UTM's mission and vision of providing in excellent quality of service to its existing stake holders on a long-term basis, an online security management system is inevitable. As a leading department, efficient security system of the whole campus could mar or promote the university's success.

## **1.3 Project Overview**

The project focused on sets of manual modules of security operations. It aimed at resolving the urgent issues and increasing the awareness of security operatives. Therefore, it targeted a subset of these modules such as admin, operational management, personal management, and sticker management.

## 1.4 Technical Report Outline

This technical report consists of the following chapters

**Table 1.1 chapters in technical report**

Chapter	Contents
Chapter 1	The Organization Background, Project Background, Thesis Outline
Chapter 2	Vision Statement, Project Objective, Project Scope, Project Deliverables, Project Plan.
Chapter 3	The Overview And The Literature Review Of OMS UTMSD, Software Engineering Disciplines.
Chapter 4	The Project Approach Used During The Development Of OMS UTMSD Project.
Chapter 5	Discussion On Implementation Of OMS UTMSD Project
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