

**WEB-BASED TELEPHONE EXTENSION  
DIRECTORY SYSTEM  
FOR MENARA CELCOM**

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# **WEB-BASED TELEPHONE EXTENSION DIRECTORY SYSTEM FOR MENARA CELCOM**

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fulfillment of the requirement for the degree  
Master of Science (Information  
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May 2008

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## ABSTRAK

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Hari ini, kebanyakan organisasi cuma menyediakan direktori sambungan telepon perkerja-pekerja mereka dalam bentuk lampiran-lampiran manual. Apabila ini berlaku, pekerja-pekerja ini akan menghadapi kesukaran dalam mengakses direktori telepon sambungan tersebut secara berkesan. Oleh itu, kajian ini mensasarkan untuk mencari jalan penyelesaian kepada direktori sambungan telepon dalam bentuk lampiran-lampiran manual yang sekarang disediakan oleh Celcom kepada perkerja-pekerjanya di Menara Celcom. Cadangan jalan penyelesaian kepada direktori sambungan telepon dalam bentuk lampiran-lampiran manual ialah dengan membangunkan sistem direktori telepon sambungan berdasarkan web. Berdasarkan fungsi-fungsi yang dikenalpasti dari lain-lain aplikasi berdasarkan web, satu model keperluan yang mengandungi "Use Case Diagram" and "Class Diagram" telah dikeluarkan untuk membangunkan prototaip system yang dicadangkan. Satu model data yang mengandungi "Entity Relationship Diagram" dan "Data Dictionary" telah juga dikeluarkan untuk menggambarkan ciri-ciri bank data kepada prototaip tersebut. Prototaip tersebut yang dinamakan sebagai **Telephone Extension Directory System (TEDS)**, telah diuji oleh kesemua limabelas (15) orang setiausaha bahagian dan empat puluh lima (45) orang pekerja-pekerja yang telah dipilih secara rawak dari berbagai-bagai bahagian dan jawatan. Fokus kepada ujian ialah untuk (1) mengesahkan fungsi-fungsi yang telah

dikenal pasti, (2) mengesahkan fungsi-fungsi yang dapat mengurangkan/menyinsihkan kesalahan-kesalahan menaip sewaktu menambah, memadam dan mengedit rekod-rekod, (3) mengesahkan fungsi-fungsi yang dapat melakukan operasi pencarian rekod-rekod yang dapat memenuhi keperluan pengguna. Secara keseluruhannya, prototaip tersebut telah lulus kesemua ujian-ujian yang telah dilakukan dengan cemerlang.

## ABSTRACT

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Today, many organizations just resort to provide telephone extension directory of their employees in the form of manual lists. When this happens, these employees might have difficulty in accessing the telephone extension directory in an efficient manner. Thus, this study aims to propose a solution to the manual lists of telephone extension directory which are currently provided by Celcom to its employees at Menara Celcom. The proposed solution is to come out with a web based telephone extension directory system that can be efficiently managed by the secretaries and accessed by its employees. Based on the identified functionalities from other web-based applications, a requirement model consisting of Use Case Diagram and Class Diagram has been produced to design the prototype of the proposed system. A data model consisting of Entity Relationship Diagram and Data Dictionary has also been produced to model the database components of the prototype. The prototype, named as **Telephone Extension Directory System (TEDS)**, has been tested by all the fifteen (15) divisional secretaries and a total of forty (45) staff randomly selected from different division, department and position. The focuses of the tests are to validate (1) the identified functionalities, (2) functions that can minimize/eliminate typing mistakes when adding, deleting or editing records, (3) functions that can perform

searching operations satisfactorily for users. In overall, the prototype has passed all of these tests with excellent scores.



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# CHAPTER 1

## INTRODUCTION

This chapter presents the main idea of the study; which is to explore the possibility of developing a web-based telephone extension directory system at Menara Celcom. First, it presents an overview of the important of telephone extension directory to the organizational daily operations. Second, it presents problems faced by the employees at Menara Celcom when using the current manual lists of telephone extension directory. Third, it presents objectives of this research study. And lastly, it presents scope and significance of this research study.

### 1.1 Overview

Today, telephone line is the most common access provided by most organizations to their employees to either communicate externally with their customers, vendors or any parties concerned to the organizations, or internally amongst the employees in the course of carrying out the organizations' business daily operations and activities. For most organizations, especially the big one, telephone extension directory is a tool that supports and facilitates

The contents of  
the thesis is for  
internal user  
only

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