

**DEVELOPING STRATEGIC REPORTS FOR NATIONAL CO-OPERATIVE OF
MALAYSIA (ANGKASA) USING DATA WAREHOUSE AND
DECISION TREE MODEL**

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UNIVERSITI UTARA MALAYSIA
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MALAYSIA (ANGKASA) USING DATA WAREHOUSE AND
DECISION TREE MODEL**

A project submitted to Dean of Awang Had Salleh Graduate School in
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ABSTRACT

Managing an organization requires access to information in order to monitor activities and assess performance. Business Intelligence (BI) solutions provide organizations with timely, integrated information that is crucial to the understanding of their business. Data Warehouse (DW) technology is one of the important strategic management approaches for decision making in an organizations. The BI combines architectures, tools, databases, analytical tools, and methodologies to enable the implementation of interactive information in generating analytical reports. Strategic reports, which influence the enduring way of the whole company, are typically used by top managers. These kinds of decisions are repeatedly complex and the outcomes unsure, because existing information is habitually incomplete. Managers at this point must normally depend on history experiences and their instincts when making strategic decisions. DW is a technology allows integrating and transforming enterprise data for strategic decision making. Furthermore, Decision Tree (DT) is a decision support tool that uses a tree-like graph of decisions and their possible consequences, including chance event outcomes, resource costs, and utility. The organization, which is, responsible to manage people activities need strategic decisions making. This paper will be focused how to design and develop Strategic Reports using DW and DT Model for National Co-operative Organization of Malaysia (ANGKASA) called DSRNCO, as a case study. This system has been evaluated through the system user feedback by using Computer System Usability Questionnaire (CSUQ), which measures system usability and user satisfaction.

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LIST OF ABBREVIATIONS

| | |
|----------------|--|
| ANGKASA | National Co-operative Organisation of Malaysia |
| BI | Business Intelligence |
| CEDI | Cooperative and Entrepreneurship Development Institute |
| CoDMODS | Conceptual Design Model Using Operational Data Store |
| CSUQ | Computer System Usability Questionnaire |
| DM | Dimensional Modeling |
| DSS | Decision Support Systems |
| DW | Data Warehouse |
| DT | Decision Tree |
| DMM | Data Mining Model |
| ERD | Entity Relationship Diagram |
| ETL | Extract, Transfer And Loading |
| DSRNCO | Developing Strategic Reports for National Co-operative of Malaysia |
| GMDR | General Methodology for Design Research |
| KPI | Key Performance Indicator |
| MAKMUM | Majlis Keusahawanan Mahasiswa Universiti Malaysia |
| OLAP | On-Line Analytical Processing |
| OLTP | On-Line Transaction Processing |
| ReCODS | Requirement Centric Operational Data Store |
| SBU | Strategic Business Unit |

| | |
|-------------|---------------------------------|
| SQL | Structured Query Language |
| SSAS | SQL Server Analysis Services |
| SSIS | SQL Server Integration Services |
| SSRS | SQL Server Reporting Services |
| RAD | Rapid Application Developing |
| UML | Unified Modeling Language |
| UUM | Universiti Utara Malaysia |

CHAPTER ONE

INTRODUCTION

1.1 Introduction

A businessman is a person who is employed by an organization or company in a business at a managerial level, especially an executive or proprietor. The business man monitors and controls his business activities as a manager. In National Co-operative Organisation of Malaysia or Angkatan Koperasi Kebangsaan Malaysia Berhad (ANGKASA), the supporting of the businessman (ANGKASA members involved in business) has become to enhance an agenda in national policy for many countries. ANGKASA is an organization that promotes the cooperative philosophy, provides member education and advisory services and publishes co-operative literatures as well as represents the co-operative movement in national and international matters. ANGKASA is an APEX cooperative, recognized by the government as the National Co-operative Movement of Malaysia. It provides training programs to members of the cooperative in addition to providing payroll deduction services to statutory bodies, government staffs, clubs, cooperatives, unions and the Global Local Company (GLC). Senior Management and executives in ANGKASA deal with reporting figures at an overview level in contrast to an analyst in a department who deals with data at finer level of detail. Reports of this type may also require operability with charts, tabular metrics and graphs. Strategic reports may involve complex analysis, which can be resolved by a Business Intelligence (BI) system.

BI refers to applications that are able to transform data into information and then into knowledge (Golfarelliet al., 2004). The main function of BI is the ability to generate analytical reports,

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