

# A REQUIREMENT MODEL FOR COMPUTER HARDWARE TRACKING SYSTEM

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A REQUIREMENT MODEL FOR COMPUTER HARDWARE  
TRACKING SYSTEM

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## ABSTRACT

The purpose of this project is to create a requirement model for Computer Hardware Tracking system for Royal Malaysia Navy. Requirement model provide a more structured and integrated guide for the development of systems. Its serves as a good starting point or reference for system developers to understand the user's requirement which save cost, time and resources, thus, helps to decrease efforts in the system development process and increased quality of developed system. The methodology for requirement model of the CHTS derived from requirements analysis, analyze requirements and validate requirement model. System modeling and prototyping approach were used for requirement validation, while HOORA Analysis Tool (HAT) was used to validate the requirement model. Unified Modeling Language (UML) notation was adopted for the development of the requirement model. The requirement model consist of use case diagram, use case specification, class diagram, sequence diagram, collaboration diagram, activity diagram and supporting textual information. This requirement model provides a guideline in developing CHTS by specifies a solution that is right for the users need. As a conclusion, the requirement model created has solved the tracking problem asa well as managing the computer hardware all over the units and ships in RMN. The requirement model can be improved that can be used in other organization. The requirement model also can be used by similar organization like army and air force.

## ABSTRAK

Projek ini bertujuan membina satu model keperluan untuk sistem pencarian peralatan komputer bagi kegunaan Tentera Laut DiRaja Malaysia(TLDM). Model keperluan ini membekalkan satu panduan yang lebih berstruktur dan berpadu untuk pembangunan sistem. Ia menyediakan satu titik permulaan yang baik atau panduan kepada pihak pembangunan sistem untuk memahami keperluan pengguna yang mana menjimatkan kos, masa dan sumber, demikian mengurangkan usaha yang diperlukan dalam proses pembangunan sistem dan meningkatkan kualiti sistem yang akan dibangunkan. Metodologi bagi model keperluan sistem ini mengandungi tiga fasa iaiti mentakrifkan keperluan, menganalisa keperluan dan meneguhkan model keperluan yang mana diperolehi daripada fasa analisis keperluan. Pendekatan sistem model dan prototaip digunakan untuk mengesahkan model keperluan. Unified Modeling language (UML) notasi telah digunakan untuk pembangunan model keperluan ini. Model keperluan ini mengandungi use case diagram, use case specification, class diagram, sequence diagram, collaboration diagram, activity diagram dan teks informasi sokongan. Model keperluan ini menyediakan satu panduan dalam membangunkan sistem pencarian peralatan computer dengan menentukan satu penyelesaian yang sesuai dengan keperluan pengguna. Secara kesimpulan, model keperluan ini dapat membantu menyelesaikan masalah mencari maklumat mengenai perkakasan komputer bagi TLDM samada di unit-unit atau kapal-kapal. Model keperluan ini dapat digunakan oleh organisasi lain dan organisasi yang mempunyai ciri-ciri yang sama seperti Tentera Darat dan Udara.

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## LIST OF ABBREVIATIONS

|      |  |
|------|--|
| RMN  | Royal Malaysia Navy                                      |
| IT   | Information Technology                                   |
| CHTS | Computer Hardware Tracking System                        |
| UML  | Unified Modeling Language                                |
| HAT  | (Hirarchical Object Requirement Analysis) Analysis Tools |
| ITS  | Inventory Tracking System                                |
| SDLC | System Development Life Cycle                            |
| TLDM | Tentera Laut DiRaja Malaysia                             |

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| A        | Sequence Diagram       |
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| D        | Activity Diagram       |
| E        | Use Case Specification |
| F        | Horizontal Prototype   |

# CHAPTER ONE

## INTRODUCTION

Nowadays, Information and Communication Technology (ICT) becomes important for the organization to be effective and efficient. The use of Information Technology (IT) in administration and management helps the manager in making wise decision. Without effective IT asset management and the associated financial metrics, it is unlikely that an organization can attain best value for core IT enabled business process. Royal Malaysian Navy (RMN) needs to know what they have before they assigned any more budgets for the purchasing of new equipment. Thus, RMN spends a lot of money in investment for development of ICT infrastructure as well as software development.

In order to manage the computers, RMN decides to develop a system known as Computer Hardware Tracking System (CHTS). Therefore, this project focuses on creating a requirements model for CHTS as beginning. CHTS will help the management to coordinate the computer hardware as well as making wise decisions.

### 1.1 Problem Statements

Currently, RMN manages the computer hardwares manually that making it difficult to allocate the computers, as the computers are anywhere in the units and ships. At the same time, RMN keeps on buying new computers and hardware that increase the number of computers. So that, the management needs to manage the new computer as well as tracking the available computers.

In RMN, the management spends too much time in tracking the computers hardware because the process is handled manually. They need to seek for the information that are recorded in the books. Sometimes, the record could not be found. So that the management will create a new record.

RMN practices in record keeping involved multiple formats and standards. Therefore, the records are kept in varieties of forms and it is very difficult in searching process. Thus, the records are not updated which result in inaccurate information.

The contents of  
the thesis is for  
internal user  
only

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