



UNIVERSITI PUTRA MALAYSIA

DISTRIBUTED NEWSPAPER DELIVERY SYSTEM

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**MASTER OF COMPUTER SCIENCE
UNIVERSITY PUTRA MALAYSIA
November 2002**



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By

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**MASTER OF SCIENCE
UNIVERSITI PUTRA MALAYSIA
November 2002**

**Thesis submitted in fulfillment of the requirements for the degree of
master science in the faculty of computer science and information
technology**



Declaration

I hereby declare that the thesis is based on my original work except for quotations and citations, which have been duly acknowledge. I also declare that it is has not been previously or concurrently submitted for any other degree at UPM or any other institutions.

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Date:



Abstract of thesis presented to the Senate of University Putra Malaysia in fulfillment of
the requirement for the degree of Master Science

DISTRIBUTED NEWSPAPER DELIVERY SYSTEM

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FEBRUARY 2003

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Faculty : Faculty of Computer Science and Information Technology

Abstract

This project aims to use distributed client/server environment instead of the traditional manual registration newspaper delivery system. This system will be developed using Microsoft Visual Basic Version 6.0 (VB6.0) and the database by SQL server (2000) as the development platform. The output of the project will be two executable files (the client and the server), which will use Windows 2000 operating system as a delivery platform. The specific advantage of this system is that it has specific calculation such as billing which saves time for the users. The proposed project will try to make the graphical user interface (GUI) as easy and understandable possible to the users (User Friendly).



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai
memenuhi keperluan untuk Ijazah master Sains

DISTRIBUTED NEWSPAPER DELIVERY SYSTEM

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Abstrak

Projek ini adalah bertujuan menggunakan persekitaran pelanggan/pelayan teragih sebagai ganti kepada sistem penghantaran suratkhbar secara pendaftaran manual. Sistem ini akan dikembangkan dengan menggunakan Visual Basic Versi 6.0 (VB6.0) dan pangkalan data SQL (Server) 2000 sebagai *platform* pembangunan. Hasil dari projek ini adalah dua aplikasi (pelanggan dan pelayan), yang mana akan menggunakan mana-mana sistem pengoperasian windows 2000 sebagai *platform* penghantaran. Faedah khusus yang



didapati dari sistem ini ialah untuk kemudahan pembayaran di mana ia mempunyai pengiraan khusus ^{yang} seperti dapat menjimatkan masa kepada pengguna-pengguna. Projek yang dicadangkan ini akan cuba untuk menjadikan pengantara pengguna grafik lebih mudah dan dapat difahami dengan baik oleh pengguna (Setiakawan Pengguna).

Approval Sheet

This thesis submitted to the faculty of computer science and information technology of University Putra Malaysia has been accepted as fulfillment of the requirements for the degree of master of computer science.

Pn. Sazlinah Hasan

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Dedication

First of all I would like to dedicate my work to my parents, whom helped me through out my study and completing my project. To my brothers Ali, his wife Samar, their Children (Precious Muna, Precious Rasha, Faris, Firas, Ahmad, Majid, Abd alrhman), Mohammed, his wife Najiah, their children (Loai, Precious Rana), Hussein, the new brides (Mousa, Samar), Maher, and to my beloved sisters Tahani, her husband Raheif their children (Mohammed, Precious Nuha), My sister Hanadi, her husband Wajdi, their children (Omar, Precious Bayan), My sister Amani, and her husband Samir.

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List of Abbreviations

Abbreviations	Word
DNDS	Distributed Newspaper Delivery System
VB6.0	Visual Basic version 6.0
OOP	Object Oriented Programming
RAD	Rapid Applications Development
GUI	Graphical User Interface
OO	Object Oriented
DLL	Dynamic Link Library
SQL	Sequent Query Language
VDI	Virtual Device Interface
ACID	Atomic, Consistency, Isolation and Durability
SMP	Symmetric Multiprocessing



Windows NT	Windows Next Technology
DBAs	Database Administrators
TCP/IP	Transmission Control Protocol/Internet Protocol
IP	Internet Protocol
NIC	Network Information Center
ARB	Address Resolution Protocol
SDLC	System Development Life Cycle
SSN	Social Security Number
DB	Database
C/S	Client/Server
SRs	Service Requests
FTP	File Transfer Protocol
HTML	Hyper Text Markup Language



DDE	Dynamic Data Exchange
DBMS	Database Management System
LAN	Local Area Network
ACLs	Access Control Lists
SIDs	Security Identifiers
RID	Relative Identifier
CORBA	Common Object Request Broker Architecture
DCOM	Distributed Component Object Model
PC	Personal Computer



Chapter One

Introduction

1.1 Overview

Distributed Newspaper Delivery System (DNDS) databases can be accessed by using several different types of delivery systems. The majority of databases are accessed by using online retrieval systems. Online information retrieval is a means whereby a searcher at a remote terminal can access and interrogate databases containing news or other data. The searcher accesses the database using a telecommunications link (Prytherch, 1995). The searcher's goal is to use this information retrieval system to locate records in the database(s) that are helpful to him/her. The uses of these systems have increased drastically over the last two decades. Connect hours have increased from 1978 with 780,000 hours to 1994 with nearly 8.5 million hours. Revenues to online vendors have increased from \$40 million to \$1.2 billion over the same period [1].

Another way to access electronic databases is by using Local Area Network (LAN) 23% of databases are accessed by Local Area Network (LAN) [1].



Traditionally, the administration of Distributed Newspaper Delivery System is very simple and easy. A typical Distributed Newspaper Delivery System management looks like this: The customer only has to write or register their name in a book to enable them to use the facilities in the Distributed Newspaper Delivery System. The owner splay the time in and the agents only pay the services based on how long they use the facilities. The owner then records the payment in a book and only uses simple ways to calculate the business billing and their income.

The need to automate billing system in Distributed Newspaper Delivery System due to expanded agent base and as to improve efficiency has resulted in demands for computerized systems. Before this many Distributed Newspaper Delivery System operators used only manual systems as their method managing a Distributed Newspaper Delivery System. However, since their operations have becoming more complex, the need for software to handle their daily tasks becomes compelling.

1.2 Problem Statement

It is not so easy nowadays for the operator to track the customers' ins and outs, their payment billing and also the newspaper delivery management.

In the traditional way, for the newspaper delivery the user must write his name and



the newspaper to delivery on a paper based form, and when the user finish, he or she must go back to the operator who keep the forms and again tell the operator that he delivered the newspaper. The use of paper will cause a problem cause human errors are happened.

1.3 Objectives

The main objective of this project is to build a client-server based application-using path, which newspaper delivery system manages to all the users their payment and less time.

Other objectives comes as follows:

- The product can help in managing the operations of the newspaper delivery and made the administration of this business is as easy as before.
- This product is aimed to help making the business more efficient and to provide a total newspaper management for daily newspaper operation.
- The timing and billing based on the rate specified by the operator can be made easy and accurate.

1.4 Scope

The system will cover the area of client-server architecture, underlying networking fundamentals and application design methodology. It will deal with many tables and all agents that sell the newspaper can use this system.

1.5 Time Frame

First this project made a primary study for four weeks, then in the fifth week until eighth week gathered some data and in the same time the code writing process started. In the ninth until twelfth week, this project analyzed the data collection and started to write out the documentation and at the same time did the programming. The eleventh week until the seventeenth week from project life cycle designed the interface and program it. Finally from the week seventeenth during interface design until week twentieth the end life cycle project were finished the coding and tested the system also applied it on three personal computer two as clients and one as a server.

The time required completing this project scheduled as in the following (using Gantt Chart):