



INSURANCE ONLINE SYSTEM

by

Ms. Natthira Sukhumpraisun

A Final Report of the Three - Credit Course
CE 6998 Project

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer and Engineering Management
Assumption University

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Project Title	Insurance Online System
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The Graduate School of Assumption University has approved this final report of the twelve-credit course, CE 6998 PROJECT, submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer and Engineering Management.


Approval Committee:



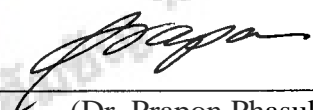
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ABSTRACT

The ever-increasing pace of technological advancement has made Internet systems an indispensable asset for any forward-thinking company. But as competition accelerates, corporations that seek to stay on top must do more. Improving productivity by working more efficiently, rapid service and convenience.

Insurance services appear to be well suited to being sold electronically. No physical goods are involved, as insurance is in effect a purchase of a promise, in the form of a contract, which can be successfully described electronically. Indeed, in some countries a legally enforceable contract can now be completed electronically, opening up the possibility of advertising, searching for, comparing alternative insurance products particularly attractive to consumers and in many countries a non-electronic market place operated by intermediaries such as insurance brokers, independent agents and financial adviser.

An electronic market place for insurance system must therefore be able to control the presence of providers and monitor customer and provider behaviour.

The new system proposed has included all functions served with company's policies and user requirement in the first phase. The next phase will continue the remaining module as well. This proposed system is developed in accordance with the System Analysis and Design techniques. The new system project discusses the user requirements, system design, hardware and software requirements, security and control and also includes the design of the input screen.

ACKNOWLEDGEMENTS

The advice of countless people went into the completion of this project. Some of these people shared their experiences in teaching and searching about E-Commerce system, Insurance system, Hardware and Software components that required E-Commerce business. Indeed, without them this project would not have been possible.

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I. INTRODUCTION

1.1 The Nature of Insurance

Insurance business is heavily dependent on trust. The insurer prices cover on the basis of information disclosed by the insured, and whilst insurers can independently verify some of the information provided, much of it is taken on trust at the time of underwriting. The policyholder also places trust in the insurer. A premium is paid in advance, on the understanding that a subsequent valid claim during the period of insurance will be paid.

Insurance services tend to be regulated in individual markets. Government agencies control who may transact such business and in many countries impose restrictions on the sales process.

1.2 Background of the Project

An electronic market place for insurance products must therefore be able to control the presence of providers, and monitor customer and provider behaviour. If such controls are facilitated, the operator of an electronic market place might be able to give certain guarantees to prospective customers.

Insurance services appear to be well suited to being sold electronically, is in effect a purchase of a promise, in the form of a contract, opening up the possibility of advertising, searching for, comparing, choosing, and taking delivery of insurance products via the internet. The possibility of comparing alternative insurance products is particularly attractive to consumers. A non-electronic market place in some insurance companies thrives, and is operated by banks, insurance brokers, independent agents and financial advisers.

The trend of Insurance business since 3 years ago is high rate of growth up until now, though other businesses had been effected from economic come down but insurance business has not met it. Thus the competition to have more shares in the insurance market of each company is higher at all times.

Brokers and agents are powerful distributors of this business. Almost all of them take forcible with gains whose company provided better made high swapping between companies. Therefore some companies try to produce their own channel for direct distribution to customers with attractive prices of insurance, the one channel is via Internet.

Nowadays electronic commerce via internet is acknowledged by the public in the world is, becoming more attractive and viable and growing up at all times with high technology of hardware and software which would be ceaselessly developed. So e-commerce is a wide channel which increases revenue through targeted customer loyalty and related marketing programs.

1.3 Objectives of the Project

The project's objectives for the Insurance Online system are:

- (1) To increase the channel for distributing information to the public via the internet.
- (2) To increase confidence in company to consumers, as a well-known company.
- (3) To increase the service toward consumers with comfort.
- (4) To collect and enhance the consumer information base for notifying about promotions and new merchandisc.
- (5) To present the existing products with a described detail of coverage toward consumers.

1.4 Scope of the Project

The Insurance on-line system is the application that consists of quotation module, invoicing module and reporting module. The details of function of each module are as follows:

(1) Quotation module:

- (a) Inquiry premium of motor insurance and print quotation.
- (b) Inquiry premium of travels insurance and print quotation.

(2) Payment module:

Pay premium by Credit card, automatic print receipt and tax invoice toward the customer.

(3) Reporting module:

- (a) Quotation report.
- (b) Order daily and statistical reports.
- (c) Payment information report.
- (d) Customer type statistical report.

1.5 Deliverables

The deliverables of the project on Insurance Online system of insurance company are as follows:

- (1) Data Flow Diagram.
- (2) Data Dictionary.
- (3) Context Diagram.
- (4) Screen Layout.
- (5) Report Layout.
- (6) Cost-Benefit Analysis.

1.6 Project Plan: (Includes Gantt Chart)

As shown on Figure 1.1. Project Plan.



II. EXISTING SYSTEM

2.1 Company Organization

Generally The Insurance Company of Non-life Insurance is organized into the main departments for daily process operation as follows:

(1) Marketing department

Operate pertaining to front office operation of company by creating or issuing new insurance products, provide target marketing, organize and support all distributors.

(2) Administration department

Back office operation. Support the related operations from other department to meet service dealing with customers.

(3) Underwriting department

To Analyses, Allocate and Issue policy of customer's cover to match with underwriting guild-line within provided limitations.

(4) Claim management department

To Inspect damaged property and negotiate with claimants and other third parties, on the amount of a claim or the cost of repair.

(5) Finance department

To receive, pay bank and issue associated documents. To allocate matching entries in the Account receivable ledgers with transfer of mis-posted account entries to the correct account. To produces a daily estimated cash flow projection to ensure that there is sufficient liquidity for day-to-day insurance operations and Agents performance reports on a paid and earned basis.

2.2 Existing Operation

This section would describe the duty of some departments that are concerned to improve operation in The Proposed system. It is shown as the follows:

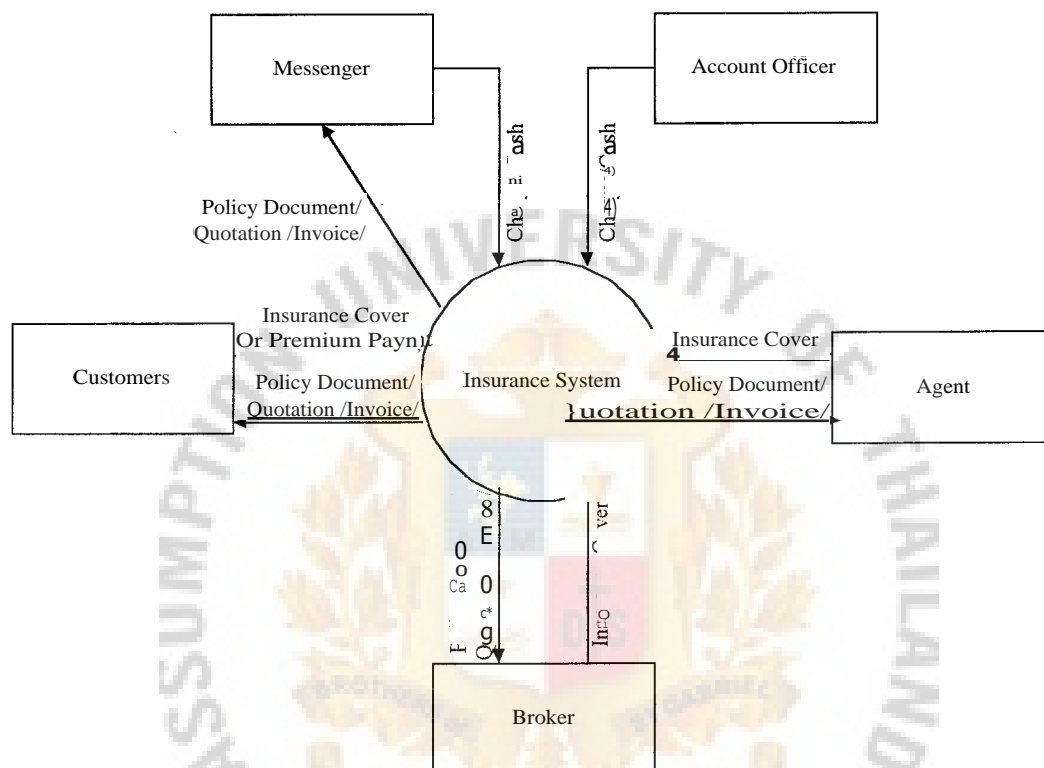


Figure 2.1. Current Context Diagram.

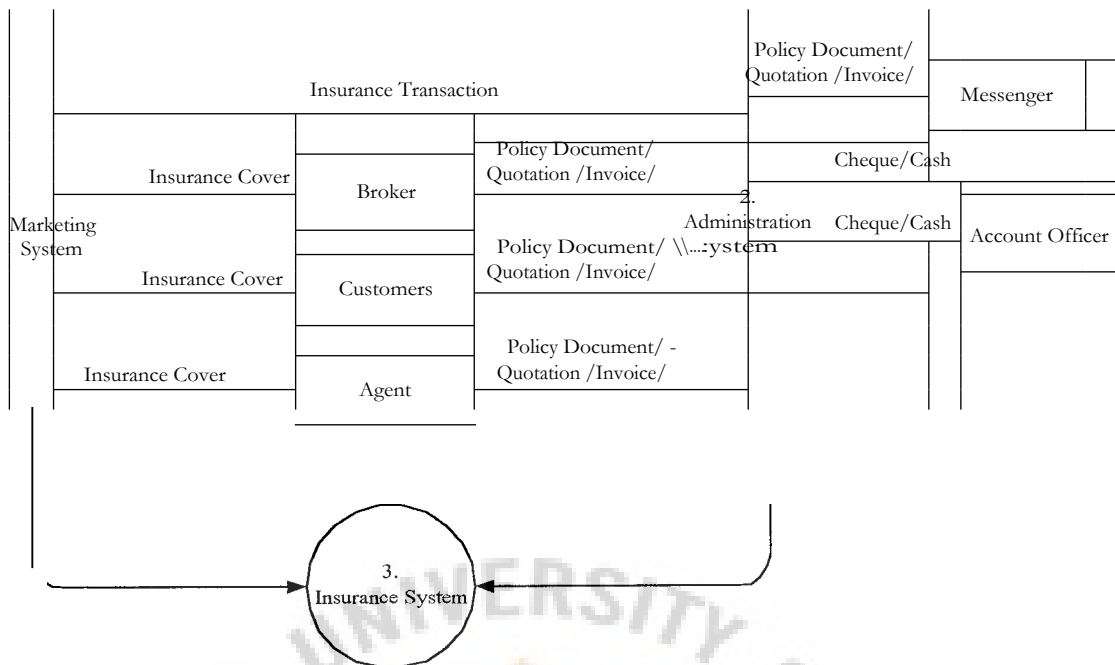


Figure 2.2. Current DFD Level 1.

2.2.1 Marketing Department is organized into the following divisions:

(1) Customer Relations is the first point of contact for clients of the company and is further divided into the following business sources:

- (a) Direct Marketing
- (b) Agents
- (c) Brokers

The role of Customer Relations is to channel the customer to the correct department and to deal with customer complaints.

It is also responsible for checking the premium received by Company before a claim is processed.

(2) Marketing Agency

This division recruits and services the active Licensed Agents and its functions are:

- (a) To provide quotations for Agents based on premium rates confirmed by the Underwriting department
- (b) To issue all renewal notices. A current membership list is issued with the renewal notice for group policies.
- (c) The receipt and vetting of Agency applications including financial status checks and references. Licensed Agents are tied to a single insurer.
- (d) Agreement of commission and credit terms which may be standard or, enhanced when there are special conditions. Standard commission is based on a common pattern and it should be possible to select a pattern rather than re-entering common rates for all agents. Enhanced commission is recorded as an additional percentage by class. Agreements are informal and can be terminated by either party at the anniversary of appointment. Profit Commission terms are agreed at the same time which can be standard or combined profitability over several years and premium volume bonuses.
- (e) Adding new Agent codes to the computer systems.
- (f) Deciding when and where to channel commission payments for Agents, to mitigate their tax liabilities.

Marketing Broker

Performs a similar function as Marketing Agency but for Brokers. Brokers are not tied to an insurance company and are free to give business to any insurer. The division will also provide quotations for Brokers based on premium rates confirmed by the Underwriting department.

(4) Marketing Special Projects

- (a) This division has 3 main functions: .
- (b) Creating new insurance products
- (c) Exploring new selling channels
- (d) Launching, Advertising new products and providing training for all distributors.

Databases of prospects are purchased by Marketing to use for mail-shots to send brochures.

(⁵) The Planning and Development division is to carry out Market Research, compile the corporate plan for Marketing, research new products and monitor insurance industry statistics.

- (a) To provide quotations based on premium rates confirmed by the Underwriting department for all channels to deliver to their clients, for especially direct contacted clients, will deliver by mail.
- (b) To keep contact and follow up all existing and new coming clients for their decision to buy insurance by mail or telephone.
- (c) To create or adjust the new insurance product which matches with clients need.
- (d) To Advertise the insurance product toward the target groups via on outsource media and internal distributors.

(6) Administration Department

This staff of department consists messengers and account officers. The messengers are responsible for the delivery of Quotation document, Policy documents and to collecting premium settlements at the same time. Account

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officers are responsible for premiums collections from a group of clients, Agents and Brokers linked to the company.

The procedures carried out by all staff are as follows:

- (a) Batches of documents related to new business, renewals and endorsements are received after issue by authorized staffs separated into a plastic folder for each quotation and policy.
- (b) The checker splits the batch into delivery batches and separates the retained copies which are given to the Account Officer responsible for filing.
- (c) When there is a prior agreement, the premium settlement will be made on delivery of the documents, this information, together with the settlement terms and the net amount to be collected, is advised to Administration on a slip that is completed by Underwriting and is attached to the documents.
- (d) If settlement is expected on delivery, the checker will request the receipt from the appropriate Account Officer with the other documents to be delivered. If a separate settlement is expected, which is usually the case for Brokers, the original receipt is passed to the intermediary and the copy of receipt is passed to the appropriate Account Officer for filing.
- (e) Messengers pick up the delivery batches and make deliveries by hand. A document receipt is signed to acknowledge delivery and, when appropriate, the settlement, usually in cash, is handed to the Messenger.

(O Messengers returning to Head Officers hand the cash to the Finance section to be paid into the bank. Any cheques collected are retained by Administration to be passed to Finance the following day.

- (g) Account Officers arrange for monthly Statements of Account to be printed showing both the premiums within the credit terms of the intermediary and those overdue. Regular telephone contact is made with the intermediary, and if a settlement has been agreed for some of the premiums due, a statement will be printed showing just these policies. The receipts and the statement will be given to the messenger for collection.
- (h) When premium collection cannot be arranged after 3 attempts, the Account Officer refers the case to the supervisor who will advise Marketing of the situation.
- (i) Account Officers continue to attempt to collect the premium.
- (j) Cheques which bounce are returned by Finance to the Administration Vice president to take up with the drawer.
- (k) Documents to be sent by post are passed to the Administration department.

M. PROPOSED SYSTEM

3.1 User Requirements

- (a) To target market sector.

To get the new target client's group by introducing insurance products via internet and company's vision world wide.

- (b) Immediately show insurance premium and issue quotation documents on visitors request.

Real time transaction processing provides all visitors with premium of interested products on screen and able to deliver quotation document toward visitor' email address if he/she press 'Print Quotation' button.

- (c) Open new channel of Premium payment to Client.

To provide convenient service for client to pay premium and automatic issue of the receipt and Tax invoice via attaching in email.

- (d) On-line information system.

This provides the analysis reports for operation and management level who are responsible for all transactions occurring in this system within their authority.

3.2 Proposed System Details

The new system design is represented in the whole picture in Figure 3.1 Context Diagram of the Proposed System. In the context diagram, it shows the relationship of entities and processes. The entities include Customers, Administration Department, Marketing Department, Underwriting Department, Management. The work procedures include inputs process and outputs.

- (a) Inputs represent as the arrow lines which direction point to the circle.

There are 3 inputs as follows:

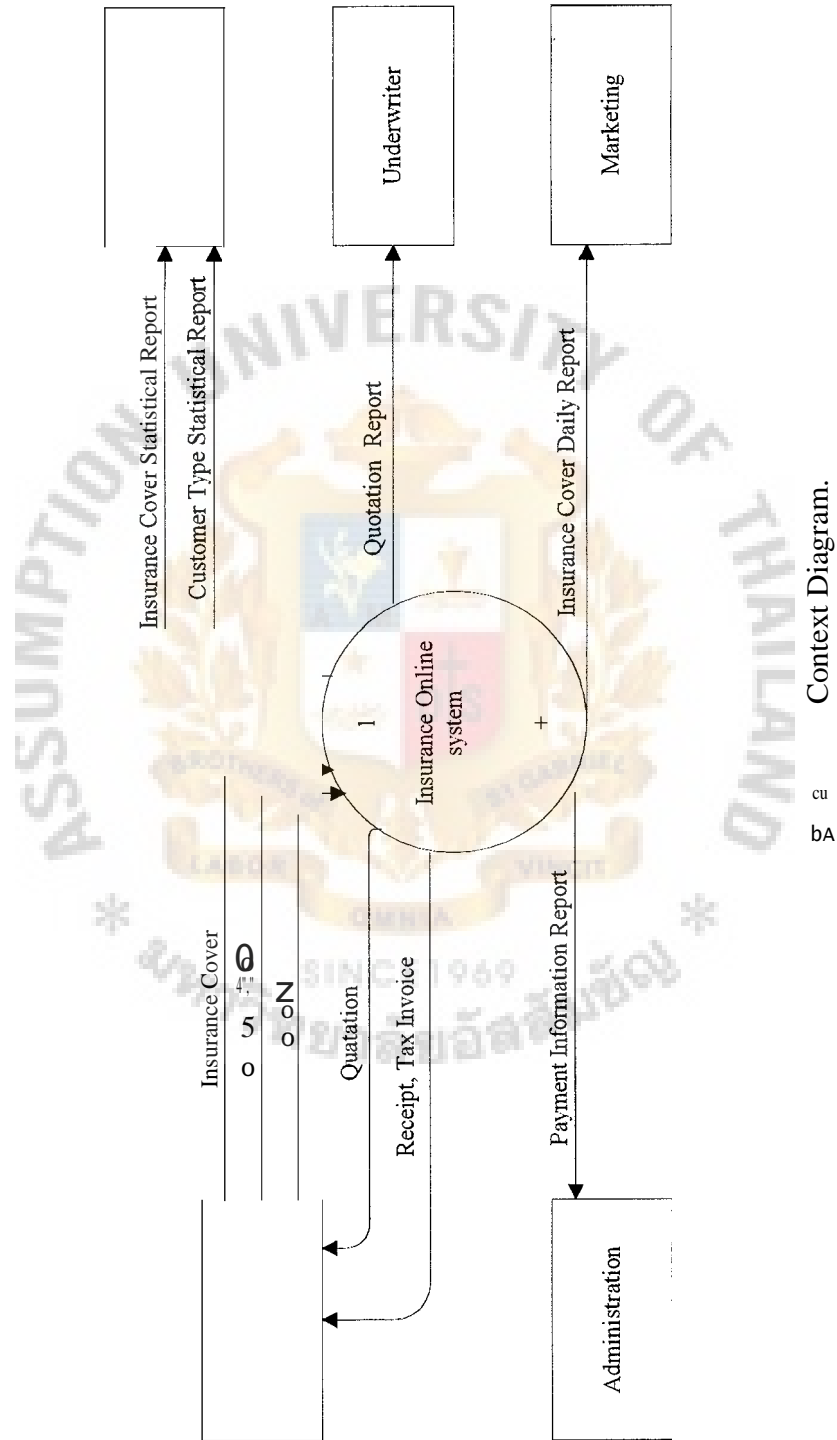
- (1) Insurance Cover
- (2) Customer Profile
- (3) Invoice Number

(b) Process represents a circle which is Insurance Online System.

(c) Output represents the arrow lines which direction point out of the circle.

There are 7 outputs as follows:

- (1) Quotation document
- (2) Receipt and Tax Invoice
- (3) Payment Information Report
- (4) Quotation Report
- (5) Insurance Cover Daily Report
- (6) Insurance Cover Statistic Report
- (7) Customer type Statistic Report



For Figure 3.2. Data Flow Diagram of the Proposed System (Level 1) divides the whole system into 3 parts as follows:

(a) Quotation System

This system supports all visitors such as existing customers, brokers, agents or new customers who survey or compare which company provide the special premiums with attractive insurance covers. Once the visitors entered all insurance information that is required, the verification information process will start and if found invalid information will be responded back to the screen for correction. After all processes are complete, the system will automatically calculate total amount of that coverage and show premium on the screen and allow the visitors to produce quotation document on request. As shown on Figure 3.3 Data Flow Diagram - Level 2 Process 1 (Quotation System) and Figure 3.6 System Flow Chart of Quotation for Motor and Travel Insurance system.

(b) Payment System

This system allows the customers, brokers or agents to pay premium with credit card when receiving insurance cover from the company. Once the visitors entered all information that is required to verify in the database and if every information is correct the system will start the linkage to Credit card system of vendor. After all Credit card process is finished the system will produce Receipt and Tax invoice documents and attached into the electronic mail for delivery to visitors. As shown on Figure 3.4 Data Flow Diagram - Level 2 Process 2 (Payment System) and Figure 3.7 System Flow Chart of Payment system.

(c) Report System

This system allows authorized users who are responsible for management to analyze that information which comes from the Insurance Online system. This has 2 category as follows:

(1) Daily Report

- (a) Insurance Cover Report divided by Product type.
- (b) Payment Information Report divided by Card type and Product type.
- (c) Quotation Report divided by Product type.

(2) Statistic Report

- (a) Customer Type Statistical Report divided by Customer type and entry date.
- (b) Insurance Cover Statistical Report divided by Product type and Type of transaction (Quotation or Non).

As shown on Figure 3.5 Data Flow Diagram - Level 2 Process 3 (Report System) and Figure 3.8 System Flow Chart of Report system.

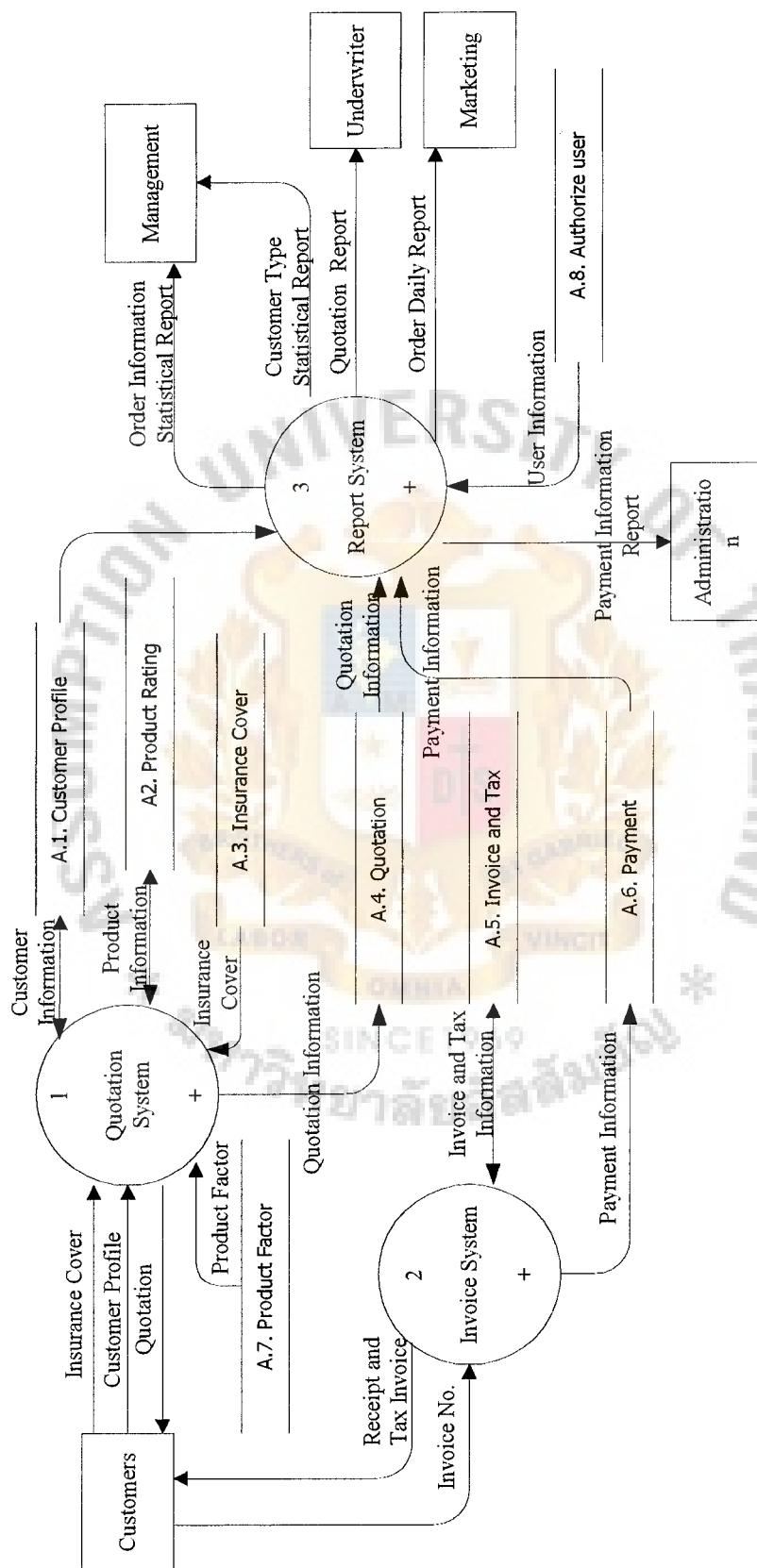


Figure 3.2. Data Flow Diagram - Level 1.

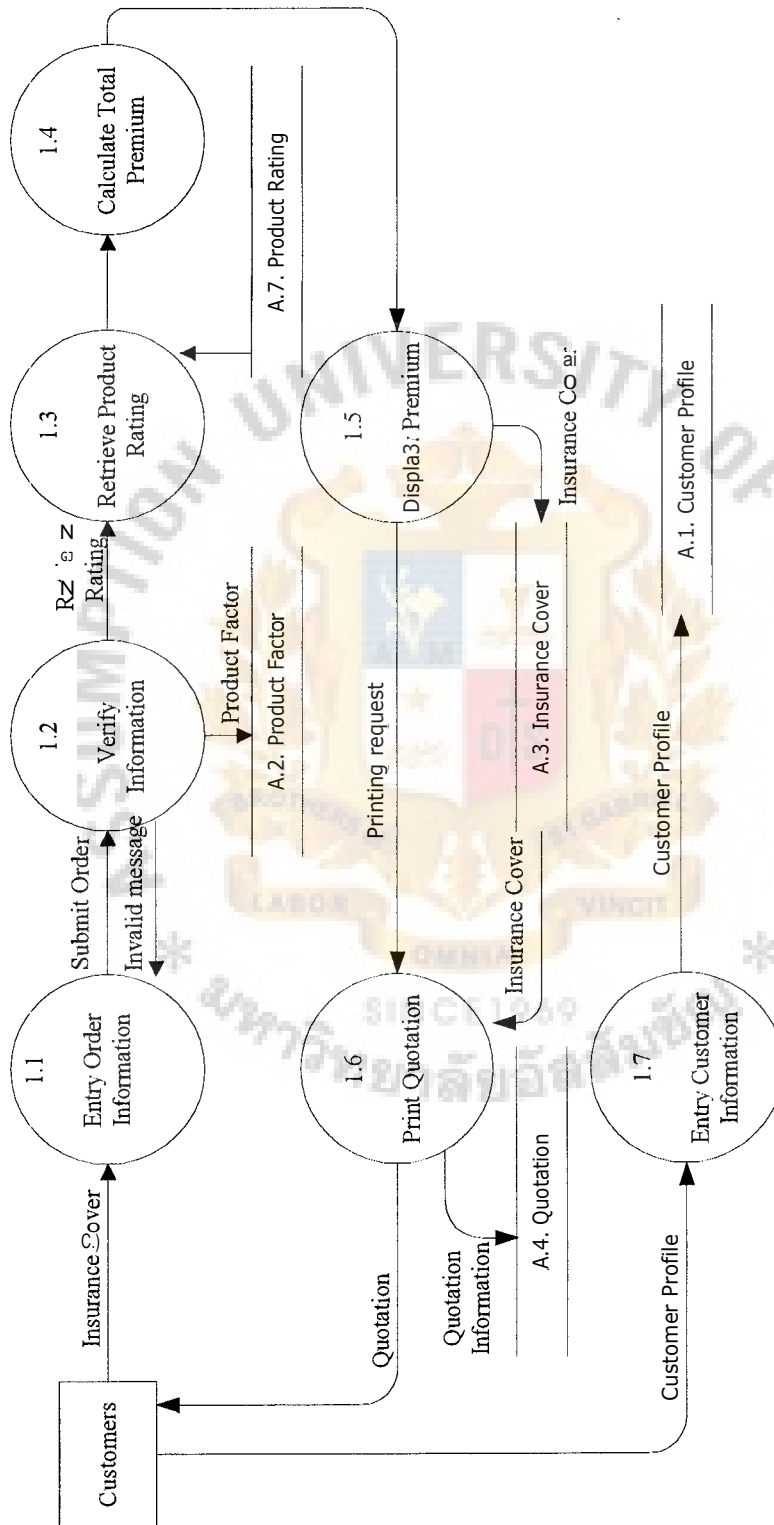
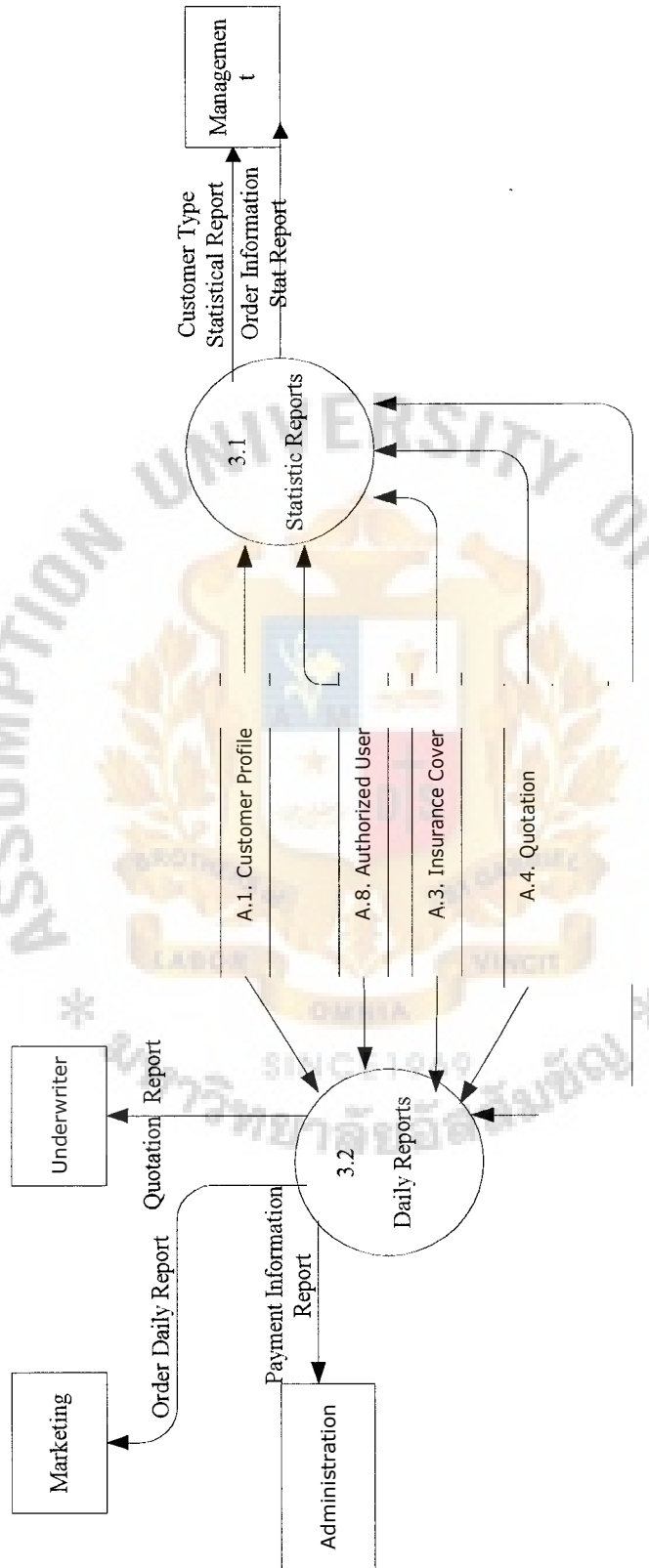


Figure 3.3. Data Flow Diagram - Level 2 Process 1 (Quotation System).



Data Flow Diagram - Level 2 Process 3 (Report System)

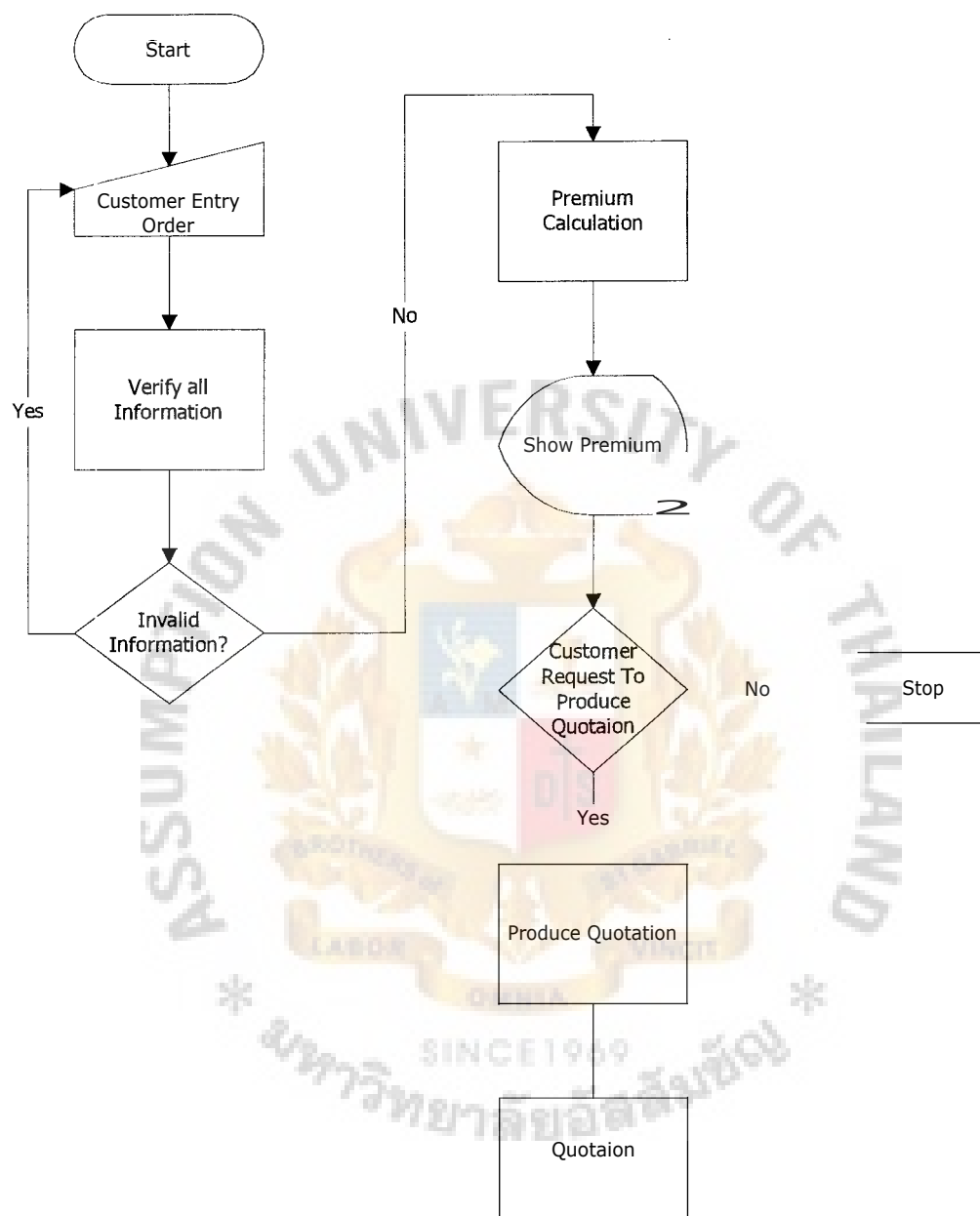


Figure 3.6. System Flow Chart of Quotation for Motor and Travel Insurance System.

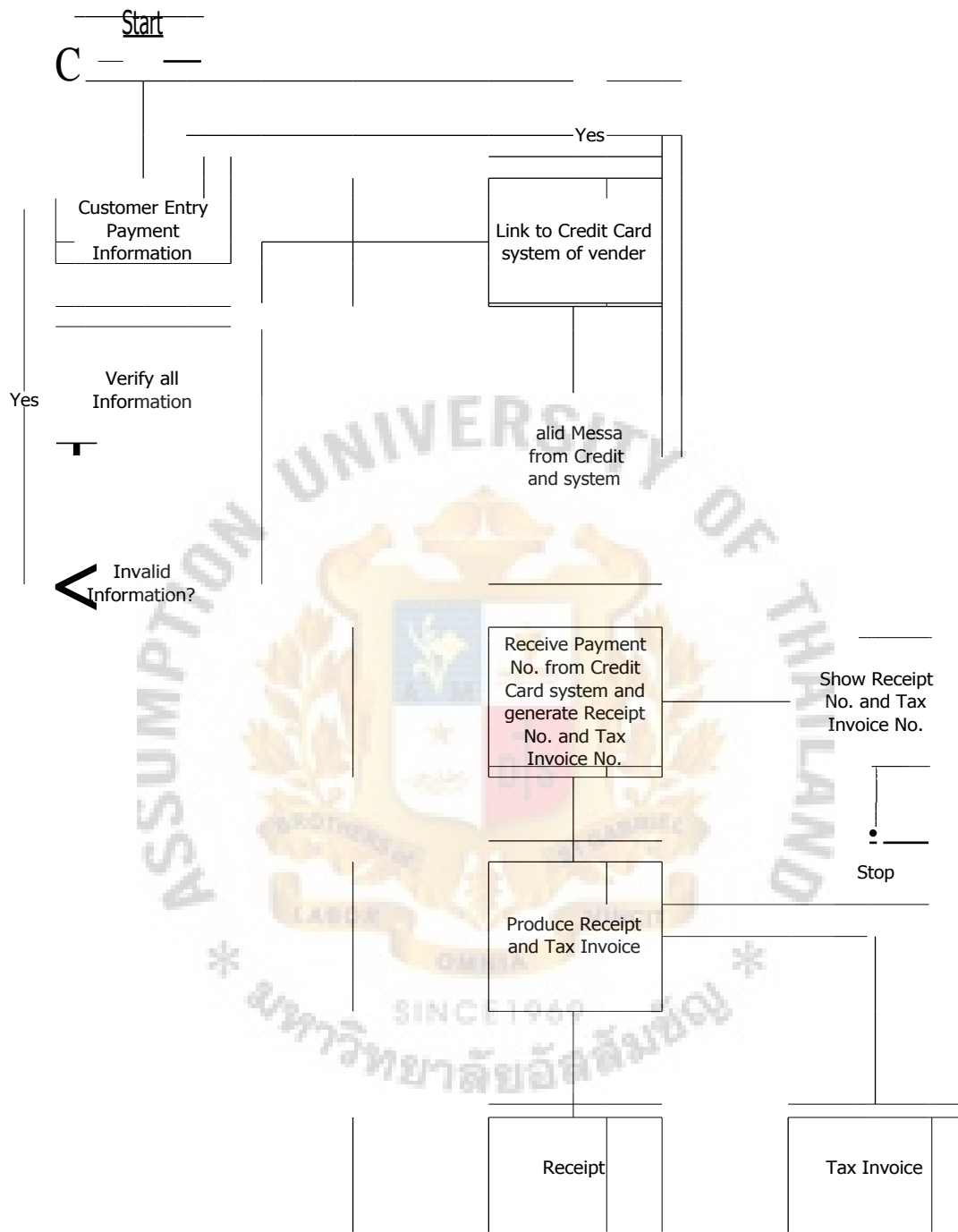


Figure 3.7. System Flow Chart of Payment System.

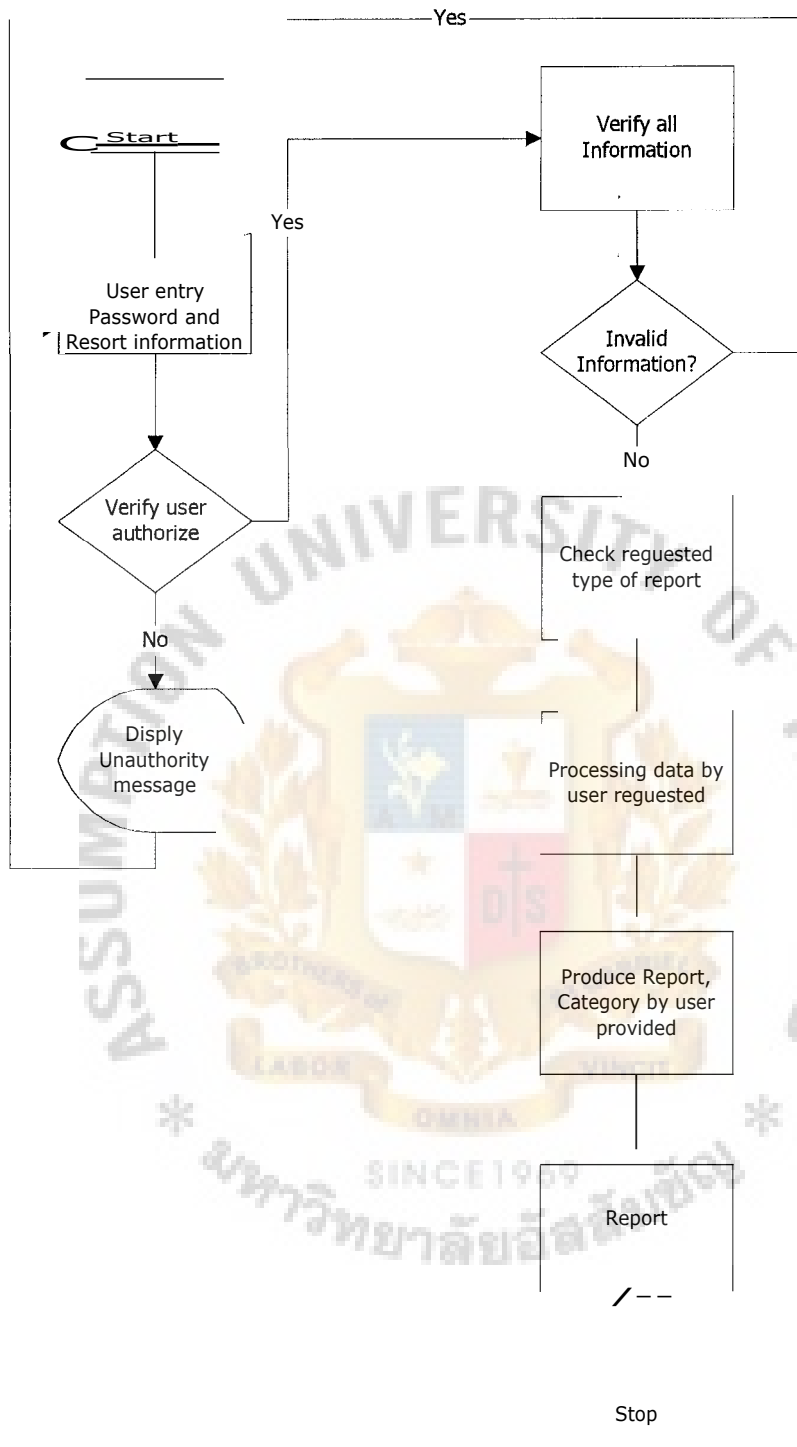


Figure 3.8. System Flow Chart of Report System.

3.3 File Layout

The File Layout shows the table name, the element name in each table, which is called an attribute name, the column name, and shows which attribute name is the primary key or the foreign key. Elements that fall into each table or that regularly combine with several other elements in many structures should be placed together into a structure record. File Layouts are shown in Appendix A.

3.4 Hardware and Software Requirement

3.4.1 Hardware Requirements

The Proposed Hardware diagram shown in Figure 3.1 includes the new Web Server/Web Application, Internet Secure Database, Proxy Server and Firewall. The proposed 128 Kbps to another ISP should be suited. The components are described in the following Table 3.1.

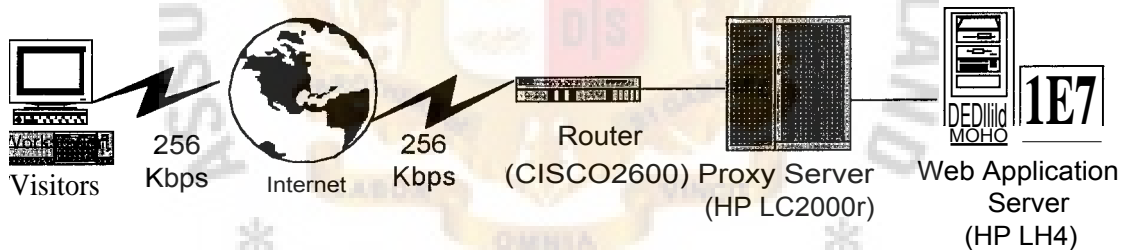


Figure 3.9. Network Configuration of the Proposed System.

Table 3.1. List of the Proposed Hardware and Components.

Hardware Model	Specification	Quantity	Price
1. BP NetServer LH 4	<ul style="list-style-type: none"> • Pentium III Xeon 550MHz • 2 MB L2 Cache • SDRAM 256MB, 4 slots • I/O Slots PCI 3,ISA 2 • NIC 10/100 TX • SCSI 1 x Ultra Wide & 1 x Narrow • SVGA VRAM 2MB • Monitor,K/B,PS/2 mouse,2 serial, 1 parallel,2 USB • Power Supply 280W x 1 	1	548,639
2. HP NetServer LC2000r	<ul style="list-style-type: none"> • Pentium PIII 800MHz • 256KB L2 Cache • SDRAM 128MB, 4 slots • I/O Slots PCI 3,ISA 2 • NIC 10/100 TX • SCSI 1 x Ultra Wide & 1 x Narrow • SVGA VRAM 2MB • Monitor,K/B,PS/2 mouse,2 serial, 1 parallel,2 USB • Power Supply 280W x 1 	1	208,617
3. CISCO Firewall Card	<ul style="list-style-type: none"> • PIX FDDI Card 	1	99,300
4. CISCO CISCO2600 Series Products Series Chassis	<ul style="list-style-type: none"> • Ethernet Modular Router w/ CISCO IOS IP Software 	1	79,400
5. APC Smart-UPS SU1400INET	<ul style="list-style-type: none"> • SU1400I with PowerChute Plus(Netware,NT,Window95) 	2	29,480

3.4.2 Software Requirements

The software will encircle the implementation of the following:

- (1) Operating System is Microsoft Windows NT 4.0 Server Thai
- (2) Database System is Microsoft SQL Server™ 7.0
- (3) Development Software is Microsoft Visual Studio 6.0
- (4) Internet Protocol Sharing (IP Sharing) is Proxy server 2.0
- (5) Software for Scans viruses and known malicious Java/ActiveX code, blocks, adult/unproductive web sites, manages and monitors web usage, notifying administrators of unusual events is InterScan WebManager
- (6) Software for Backup is Backup Exec for Win NT, Agent for Ms SQL server of Veritas.

3.5 Cost/Benefit Analysis

Investment Costs (Cost Analysis)

(1)	Hardware Configuration	994,916 Bahts
(2)	Software Configuration	
(a)	Windows NT 4.0	92,800 Bahts
(b)	MS SQL Server 7.0	30,620 Bahts
(c)	MS Visual Studio 6.0	41,282 Bahts
(d)	Proxy Server 2.0	38,205 Bahts
(e)	InterScan WebManager	1,032 Bahts
	(2 x 516/@)	
	(0 Backup Exec for Win NT	25,400 Bahts
	Total	229,339 Bahts

St. Gabriel's Library

(3) Operating Cost

(a) Internet Lease line speeds 256 Kbps	600,000 Bahts
(50,000x 12 Month)	

(4) Implementation Cost

(a) User Training	5,000 Bahts
Grand Total	1,829,255 Bahts

Benefit Analysis

The volume of insurance's transactions of each month in existing system

(a) Net Premium of Travel and Motor	9,600 Bahts/Trans
(24,781, 916Bahts/2500 Transactions)	

The Marketing Officer expects the proposed system would be dealt with for the customers around 10% in the first semiannual and will be increased to be 30% at the next semiannual. Then the volume and number will be increased in the first semiannual as follows:

(1) First semiannual, 10% of 2500 transactions	250 Trans
Or	2.4 Mbahts
(2) The next semiannual, 30 % of 2500 transactions	750 Trans
Or	7.2 Mbahts

The company can obtain the benefit from the interest amount (interest rate 10% per year). When the company implements the proposed system, the total saving is as follows:

Total saving of 1 st semiannual	: 2.4 * 10 %	=	0.24 Mbahts
Total saving of the next semiannual:	7.2 * 10 %		0.72 Mbahts

The payback period is the methodology to measure the performance of the benefit which accumulate earning sufficient to cover the investment. It can be calculated as follows:

$$\text{Payback period} = I / (1-T) R$$

$$\text{Where } I = \text{Investment of capital expenditure}$$

$$994,916 + 229,339 + 600,000 + 5000$$

$$1,829,255 \text{ Bahts}$$

$$\text{Annual saving}$$

$$240,000 + 720,000$$

$$960,000 \text{ Bahts}$$

$$\text{Tax Rate}$$

$$30\%$$

$$\text{Payback period} = 1,829,255 / (1-0.3) 960,000$$

$$2.72 \text{ Years}$$

Payback Period (after taxed) for the proposed system is 2.72 years as shown in the

Figure 3.9. Payback Period Chart.

Payback Period Chart

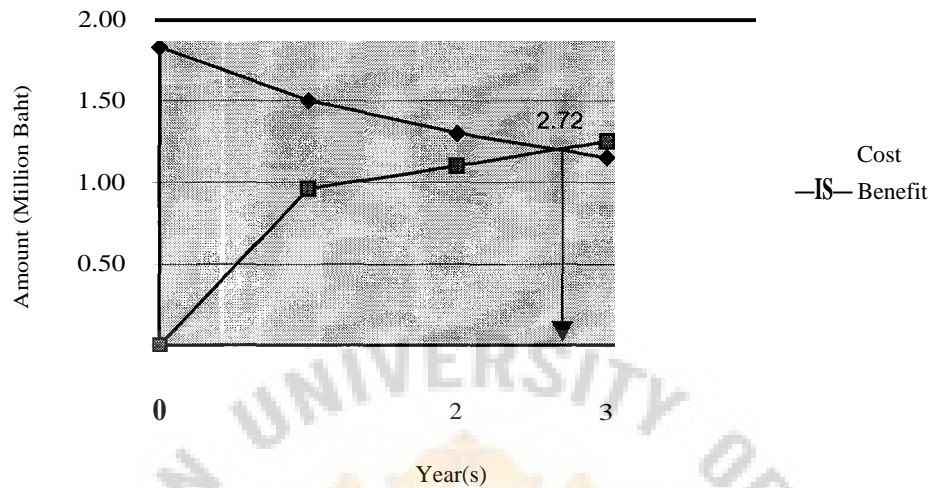


Figure 3.9. Payback Period Chart

3.6 Security and Control

Security in computing is a very vital issue. The major assets of computing system are hardware, software and data. They are susceptible to attacks. An attack to a hardware is that it becomes lost or unusable. Somebody might steal it or maliciously destroy the hardware device. Software can also be destroyed maliciously or it can be modified or deleted. Data attack is another serious problem as an unauthorized party might try to have an access to it and modify it. Considering the attacks that the computing system faces, the following security and control methods are proposed.

- (a) To assure the authentication, proper access and maintaining of password is provided in the program for the users to have an access to certain sensitive areas in the data.

- (b) Protection with Firewall, which protects and filters all traffic by time-of day, address, port number, direction, protocol and prohibiting inappropriate bandwidth consuming traffic. Furthermore they provide secure user access at a granular level.
- (c) To prevent loss of data during a power failure, the UPS (Uninterrupted Power Supply) is recommended.
- (d) To prevent an accident that may destroy the files during processing, even so the architecture of web server proposed is dual processing which was designed to serve this problem but to ensure protection these should be backup tapes which is used to recover any destruction or error on files.



IV. PROJECT IMPLEMENTATION

4.1 Testing

Testing is the process of executing some part or the whole of the system to discover any errors. Testing of specific programs, subsystems and the whole system is momentousness for quality assurance of software. It is done in order to be apparent for any existing problem with programs and their interfaces before the system is actually used. The bottom-up fashion in the practice of testing can be described as follows:

(1) Program Testing

This step consists of running a new or modified program, which appears to be working correctly with sample data. The sample data should be comprehensive enough so that they cover all the conditions the program will encounter in its foreseeable future.

(2) Module Testing

This step is the process of testing the individual modules that make up the whole program. After all the individual modules are tested and assessed, working properly can begin. This often consists of ensuring that the interfaces between modules work as they should and that these individual modules do not have an adverse effect on one another.

(3) System Testing

This step ensures that all the programs that make up the new system work together as they should. User interfaces, the system's security features, the ability to deal with abnormal processing volumes and the ability to recover from software failure are tested.

(4) Acceptance Testing

This step evaluates the extent to which the new system meets user requirements under normal operating conditions. This is often the last chance to test and re-think the program before the software is converted from development to operations. The managers and users should be heavily involved in acceptance testing.

4.2 Implementation

The process of assuring that the information system is operational and then involving well-trained users in its operation. The actual implementation will follow the project schedule as a guideline, however, additional factors that arise in the normal course of the project evolution should be considered. The team must establish plans that phase in deliverables in a reasonable manner. In large system projects, the primary role of the analyst is overseeing implementation by correctly estimating the time needed, and then supervising the installation of equipment for a traditional system, training of users and converting files and database to the new system. There are two steps involved in implementing the proposed system as follows:

(1) User Training

Training is becoming a major component of implementation. When a new system is acquired which often involves new hardware and software.

The users have to be able to run the whole system without the intervention of the analyst. The analyst has to consider who needs to be trained, who will train them, objectives of training, methods of instruction to be used, sites, material and time.

(2) Data Conversion

The process of switching from one system to another. Before this step, users and computer operations personnel should be trained in their new duties, application software for the new system should be available and ready to use, the necessary data conversions should be completed and hardware should be in place. Conversion is often accompanied by adjustment problems because users may be resistant to change, Potential conversion problems should be anticipated, contingency plans should be developed in case major problems are encountered.



V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The purpose of this system development project is to analyze, design and implement the system to opening a new channel of current marketing trend, offering a comprehensive selection of insurance covers for the public and increasing a convenient payment system with credit card for customers which serves the company's strategy.

From the existing system, the marketing department has to manage, coordinate and negotiate in order to satisfy all distributors and also gain marketing advantage. They found the problem in a high rate of turn over in some distributors that made the company lose some income.

The proposed system will provide the E-commerce market places with the computerized information system. It can also save the cost of travel, labor and a great deal of time in processing all the steps required to complete the sale of insurance business. The customers are getting superior service without wasting time in payment at the office. This will also meet marketing target with opportunity to increasing market share, to disclose the visual management and trust of financial status of company to the public. The operation can meet user requirement such as the control of online customer order process, more reliable and consistent procedures to eliminate errors, security and operation control for protecting data, ease of usage, backup and recovery data, etc. Moreover, the process is fast, accurate, complete, up to date, cost reduced advertising, increased efficiency and enhanced communications.

5.2 Recommendations

More than half of all businesses worldwide is adopting Internet-based electronic commerce in the coming year, according to a survey of more than 1,000 chief information officers by Deloitte & Touche Consulting Group in New York. The

explosive growth of e-commerce revenue is just one reason why organizations are investing in e-commerce applications. Other important reasons are the need to improve customer service levels by providing immediate access to product information and order placement on a 7x24 basis. An effective e-commerce strategy gives a company a global reach without increased overhead and builds a long-term competitive advantage.

This project is the initiative phase of E-commerce in insurance business of the company. The next phases of this project will continue to be proposed and implement the other modules until completion of the whole core system of existing system.





APPENDIX A

DATA DICTIONARIES

DATA DICTIONARY

Table A.1. Customer Profile.

Attributes	Field Length	Field Type	Field Description
#Customer Name	70	Text	Customer Name
#Company_Name	70	Text	Company Name
Customer Surname	100	Text	Customer Surname
Title	20	Text	Title Name
Email Address	30	Text	Email Address
Address1	45	Text	Address1 of Company
Address2	45	Text	Address2 of Company
Address3	45	Text	Address3 of Company
Address4	45	Text	Address4 of Company
Customer_ID	10	Alphanumeric	Customer ID
Tel No.	20	Text	Telephone Number

Table A.2. Product Rating.

Attributes	Field Length	Field Type	Field Description
#Product_Name	6	Text	Product Name
#Factor Code	3	Text	Factor code of Coverage
Factor_Rate	8	Numeric	Percent of Factor
Description	20	Text	Description of Factor

Table A.3. Insurance Cover.

Attributes	Field Length	Field Type	Field Description
#Product Name	6	Text	Product Name
#Factor_Code	3	Text	Factor code of Coverage
Description	20	Text	Description of Factor
Flag	1	Text	Compulsory or Voluntary

Table A.4. Quotation.

Attributes	Field Length	Field Type	Field Description
#Quotation_No.	10	Alphanumeric	Quotation Number
Product Name	6	Text	Product Name
Issue Date	10	Date	Issue date of Quotation
Premium	15.2	Numeric	Premium of Insurance
Customer_ID	10	Alphanumeric	Customer ID
Order No. Ref	10	Alphanumeric	Order No. Reference
Status	1	Text	Status
Remark	70	Text	Customer Remark

Table A.5. Invoice and Tax.

Attributes	Field Length	Field Type	Field Description
#Invoice_No	10	Alphanumeric	Invoice Number
Amount	15.2	Numeric	Invoice Amount
Tax_Type	2	Text	Tax Type
Tax_amount	15.2	Numeric	Tax Amount
Trans_Type	2	Text	Transaction Type
Invoice Date	10	Date	Invoice Date
Payment_Code	10	Alphanumeric	Payment Code

Table A.6. Payment.

Attributes	Field Length	Field Type	Field Description
#Payment Code	10	Alphanumeric	Payment Code
Amount	15.2	Numeric	Payment Amount
Payment_Type	2	Text	Payment Type
Invoice No	10	Alphanumeric	Invoice Number
Payment_Date	10	Date	Payment Date

Table A.7. Product Factor.

Attributes	Field Length	Field Type	Field Description
#Payment_Code	10	Alphanumeric	Payment Code
#Factor Code	6	Text	Factor Code
Factor	15	Text	Factor Value
Description	30	Text	Factor Description

Table A.8. Authorize User.

Attributes	Field Length	Field Type	Field Description
#Login	10	Text	User login
Password	10	Alphanumeric	User password
Email address	30	Text	Email address
Department	20	Text	Department
Level	20	Text	Position level
Status	1	Text	Authorize status





Figure B.1. First Page of the Company Web Screen.

Insurance 0 line Motor - Mieraxon - Internet Explorer

http://Insurance Online Motor .t.htm

Direct **MOTOR INSURANCE**

Motor
Pay Premium
Report

Personal Information

Title:

Forename: Surname:

Address:

Postal Code:

Home: Tel. Cece:

Sex:

DEC of Seth.

Ma-Sal StatLE: I Meined

Email:

Occupation:

Employment:

mail business:

Vehicle and other Information

How many years have you held a full Thailand driving licence?

0800 111 600

Start | Internet Explorer | Microsoft | Sony | Insurance (Inara)

Figure B.2. Motor Insurance Web Screen.

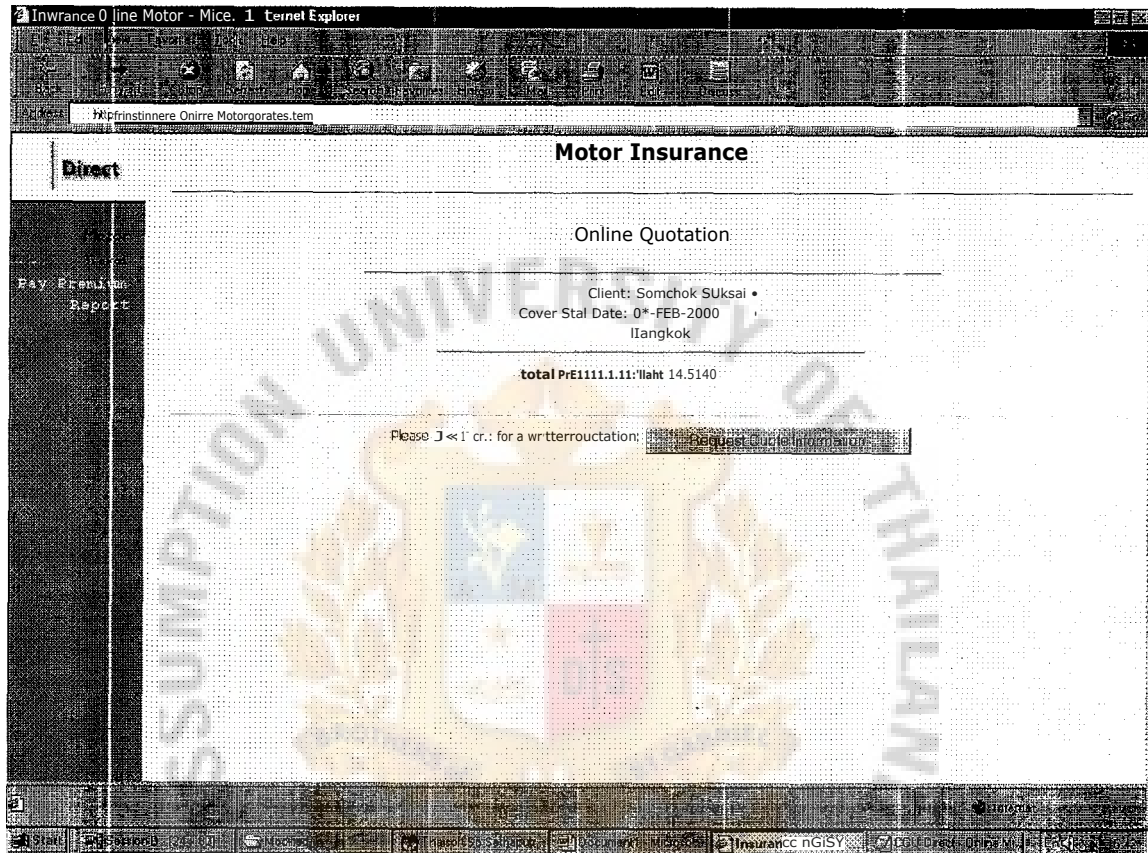


Figure B.3. Online Quotation for Motor Insurance Web Screen.

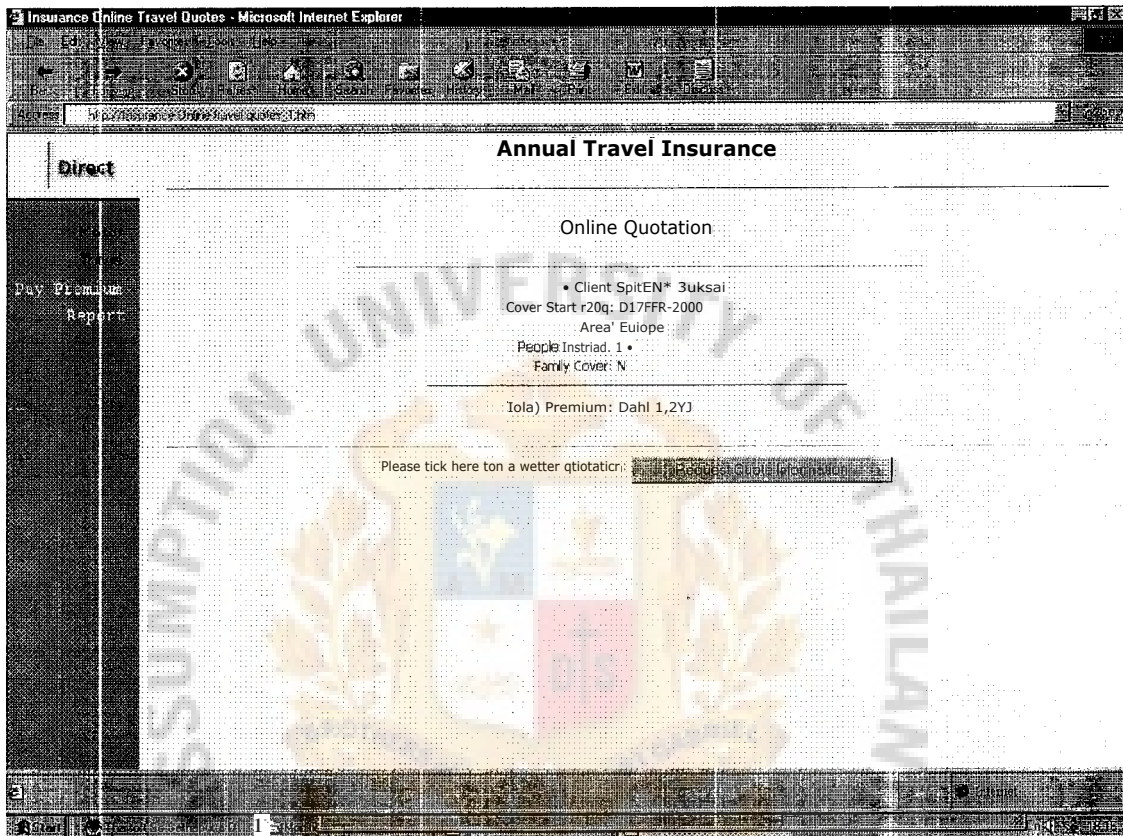


Figure B.4. Online Quotation for Annual Travel Insurance Web Screen.

Insurance Online Payment - Microsoft Internet Explorer provided by Internet KSC

http://Insurance Online Pay Premium.htm

Pay Premium

Direct

Pay Premium Report

Invoice Information

Name on Invoice:	ISomchok Suksai
Invoice No.:	IM12345
Invoice Description:	Payment for Policy no.=D00N7BK000981
Amount on Invoice:	[10,120
E-mail:	somchok@hotmail.com

Credit Card Information

Credit(Debit Card Details	
Card Type:	'Visa - - -
Card Number	

Figure B.5. Pay Premium Web Screen.



APPENDIX C
REPORT LAYOUT

Microsoft Access - [Order Report]

90%

Order Report

Print date : 9999/9999
By: XXXXXX

Product ilume : E T.

frdor : ^lc IrEura liuniA.Wthrt Adik Cave Per.obl Prom: / : nstf Policy
XXXXXXXX 99/99(9999-9),999999 999,999,999,99

X:c.XXX9.:XXXXX):0.)797XXXXXXXXXXXXXXXXXV.*X".C. XXXXXXXXXXXXXXX

Product N*xne : ILIMLIXV.115:11fa

ML : Ord :	99 99	Total. Pramitn:	599	99
Toth! AO. ;11 ado . 99,599 71-4.1f az: M, 999, 999.99				

Ready

Figure C.1. Order Report (Daily Report).

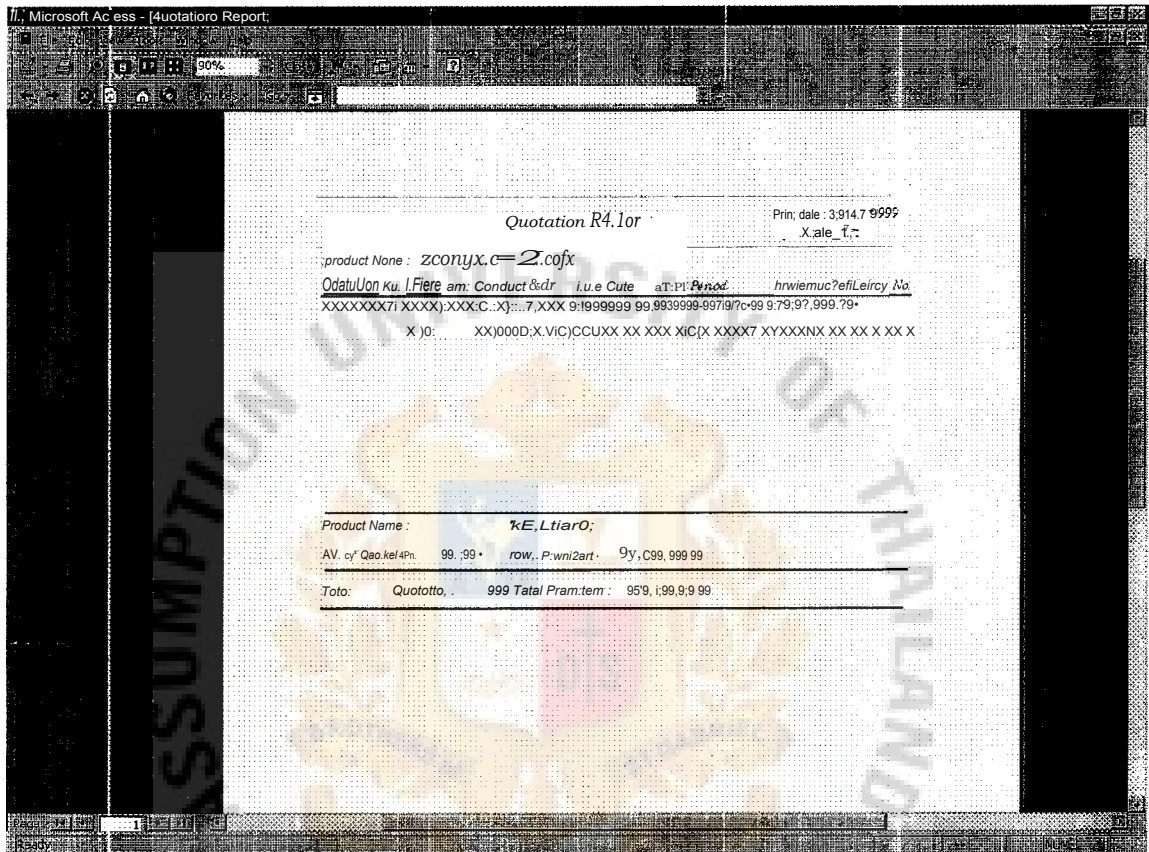


Figure C.2. Quotation Report (Daily Report).

3D MinnsrAt Ar - [Payment: Intern/Intim]

85%

Print dat.: 991990999
By .

Payment Information

P4:im Pau Par.ment Ara/bra, Hu	Due L. ee	st.ocoel L.ku	AMA, ut	Trammotur: Type- Storm	'tā ā
99/5919399	XXXXXX=C:l:	9919919999	99/990999	999,999,999,99	-LA-AA AX A AA.
X.Y. = X X X			X .		

T/t.H.P.y.e.c.r 9 99.9 999.99

Figure C.3. Payment Information (Daily Report).

Microsoft Access - [Statistic Customer Information]

Print: 1-01: 9717919:1
By:

Statistic Customer Information

Report: 4.50 yes,60 ir\$

xxxxocxx: 9.999 9.999 9.999 9.999 9.999 9.999 9.999

Aide 97dY9 9.939 9.999 9.599 9.999 9.999

To: til Female 9.999 9.999 9.999 5.99 9.599 9.999 9.999

Figure C.4. Statistic Customer Information (Statistic Report).

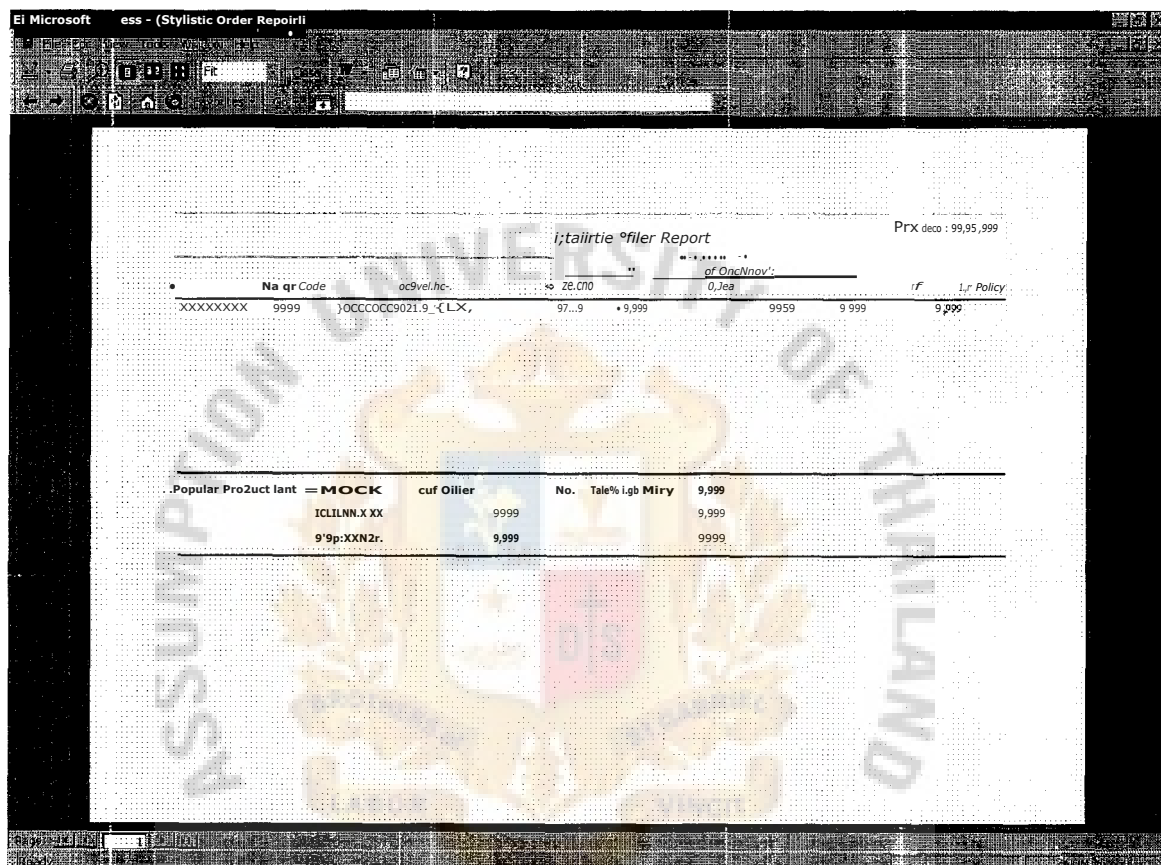


Figure C.5. Statistic Order Report (Statistic Report).

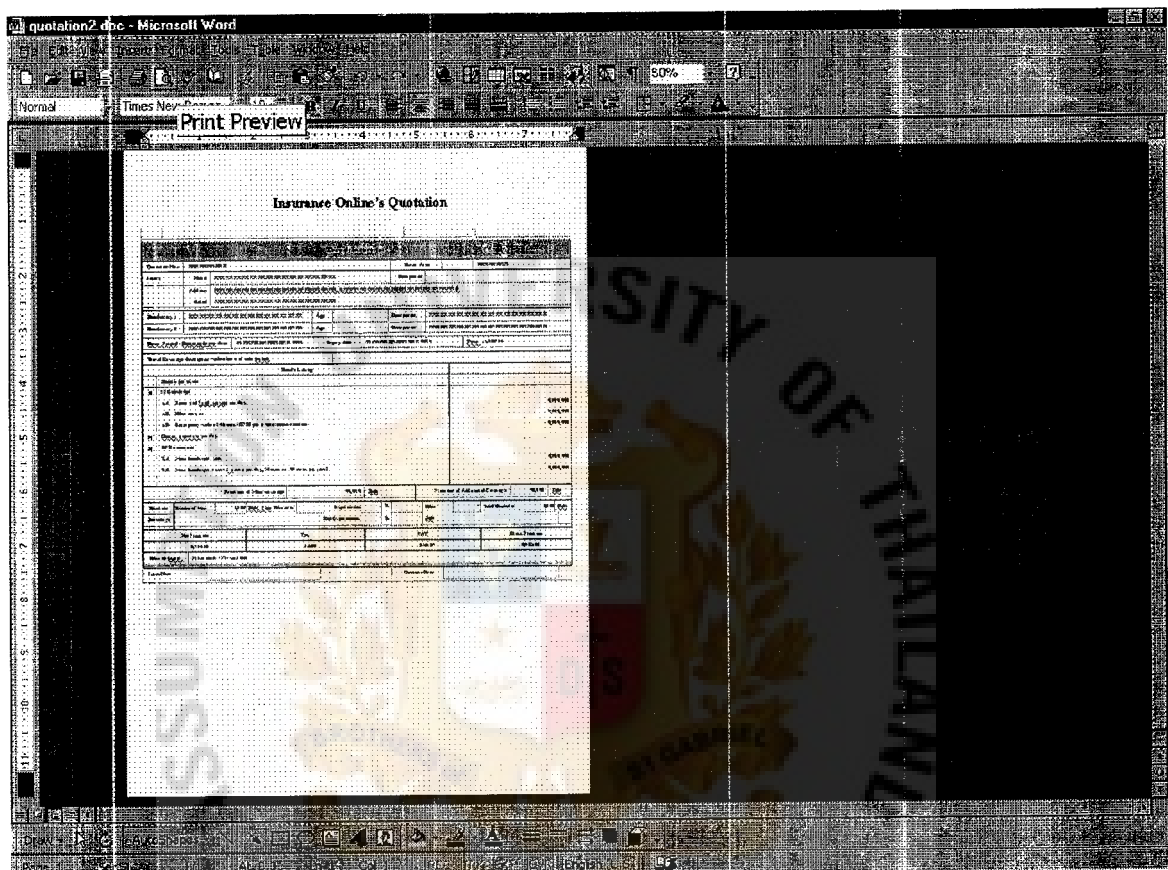


Figure C.7. Insurance Online Quotation for Travel Insurance (Document).

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