Sales Information System for LYS
Intertrade Co., Ltd.

By

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Final Report of the Three - Credit Course
CS 6998 System Development Project

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CS 6998 System Development Project

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The Graduate Schools of Assumption University has approved this final report of the three-credit course, CS 6998 System Development Project, submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer Information Systems.
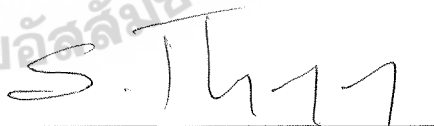
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ABSTRACT

Nowadays the computer has been widely used in every field of business. It can help people to increase efficiency and effectiveness. The work will be done in shorter time with more accuracy. Therefore, the existing manual system must be replaced by the computerized system to increase the competitive advantages against rivals, to improve the working method, to reduce redundant processes, to create better services, and to provide more accurate and up to date information for management.

On this System Development Project, the System Analysis Phase includes several tasks such as studying the existing system functions, equipment and documents, identifying the current problems and areas which have to be improved and organization planning. The System Design Phase covers the new system for users' requirements in details such as Sales Activities, Purchasing, Sales Orders, etc.

This project, therefore, intends to provide a better solution to the existing problems and increase the efficiency of the operations by applying a computerized system. The information for management will be consistent, accurate, timely, complete, and relevant so the management can make the right decisions and planning for expanding the sales volume and sales channel in order to increase both tangible and intangible benefits to the organization.

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TABLE OF CONTENTS

iii

LIST OF FIGURES

LIST OF TABLES

I. INTRODUCTION

1.1 Background of the Project

To deal with the business process nowadays is tougher; business process improvement has become one of the leading methodologies to compete with other competitors. Businesses are seeking not simply to automate existing operations, but to improve and redesign business processes to meet customers' expectations for products and services delivery.

Nowadays, the most important thing in the business process is information. Information is very important to every company. The companies, which can get the information first, will be candidates to get more market shares. The company that does not treat information as a valuable resource, will face problems in doing business.

LYS Intertrade Co., Ltd. was established in 1978 by the partnership between a Thai and a Chinese Company for importing and distributing a wide variety of standard and quality steel products, supplying local construction and manufacturing industries. According to their good quality and services that support not only existing customers, but also prospected customers, together with their experience in this business for about 20 years, most of them appreciate high quality products and services at a reasonable price as well. LYS Intertrade Co., Ltd. therefore, becomes the stable leading importing and distributing company for the construction and manufacturing industry.

Generally, the Sales and Marketing Department is the heart of the company in creating the profit revenue. But the company currently has problems about a sales information system that is the result of the company's quick expansion. These problems can be defined as the delay in finishing customers' orders, incorrect pricing, inefficient reporting system, no updates of the inventory data, overdue credit, etc.

1

Because of these problems, the management had decided to develop a computer system to handle these problems and to increase the efficiency and the productivity.

In this captioned project, the main focus is on the Sales Information System for LYS Intertrade Co., Ltd. that is to be used in their Sales and Marketing Department. A Sales Information System is a system that gives many advantages for use in Sales Management.

The purpose of this project is to enhance the productivity of Sales and Marketing and to increase accounting efficiency by automating existing operations such as: issuing invoices, delivery orders and receiving products' return slips, creating account statements, receipt payment slips, and keeping track of sales. Also, to establish an information base for Management for making appropriate decisions concerning Sales and Marketing in terms of generating revenue. To make use of information networks to access relevant information from databases is also a must, because it is important to eliminate duplicate activities, prevent errors from occurring, cycle time reduction in product development, and determine customer responsiveness.

Finally, this project aims to integrate all the business applications to increase its efficiency and support the accurate information for the management.

1.2 Objectives of the Project

The objectives of the project on the Sales Information System for LYS Intertrade Co., Ltd. can be defined as follows:

1. To perform the system analysis of the existing Sales Information System for LYS Intertrade Co., Ltd.

2. To identify the problems, users' requirements and major objectives in the case of using a Computerized System to replace the existing manual system.

3. To design the new Computerized System of the above system.

4. To implement the complete Computerized System of the above system.

5. To develop the software for handling the new system which is written in Microsoft Access.

1.3 Scope of the Project

The scope of the project will cover the major parts of the Sales Information System for LYS Intertrade Co., Ltd., which includes:

1. Responding Customer Sales Quotations

   Sales Executives will get and take all customers' requirements together with price calculation and conditions as per their requirements and re-submit them as a quotation after being approved by the Managing Director.

2. Process Customer Orders

   After receiving the customer order confirmation, Sales Representatives will check out the correctness of the orders and start the process order together with the order re-confirmation for customers as well. If the products are not available at the warehouse, Sales Representatives also need to contact the overseas suppliers for material procurement.

3. Updating the Inventory

   To record the new inventory, once the shipment has arrived from the overseas suppliers to the warehouse, Warehouse's Staff must update the inventory records, before delivering to the customers' location and starting the next the process.

4. Process Sales Orders

   Sales Representatives will assign the customers' orders to the Warehouse and Delivery Department and also, allocate staff for pre-delivery preparation and checking product readiness.

3

5. Delivery of the Products

   Warehouse and Delivery Department issues delivery order together with invoices which are issued by Accounting and Finance Department and deliver both products and documents to the customers' sites.

6. Process Customers' Payment

   Accounting and Finance Department will inform to the Managing Director when the invoice is due. Sales Representatives will call and meet the customers to settle the payment and pass these details to the Accounting and Finance Department, accordingly.

1.4 Deliverables of the Project

The deliverables for the project on Sales Information System for LYS Intertrade Co., Ltd. are as follows:

1. A Software Package written in Microsoft Access (Relational Database) with user manual to operate the program that developed on a PC Platform.

2. Screen Layout and Menu System for user interface.

3. Various hard copy layout which contains the following information:

   Input Screen Design :

   - Login Menu Screen

   - Main Menu Screen

   - Sales Information System Main Menu Screen

   - Customer Information Input Screen

   - Overseas Manufacturer Input Screen

   - Sales Quotation Input Screen

   - Etc.

Reports/Forms Design :

- Sales Quotation Report

- Customer Orders Report

- Product Purchased Report

- Inventory Report

- Etc.

1.5 Project Plan and Schedule

The Project Plan represented in a Gantt Chart is shown in Figure 4.1.

1. Initial studies are on the organizational structure, and problems related to each area. The next studies define the area under study and develop the Context Diagrams.

2. Interviews and observations are made to provide understanding of the Existing System, and problems that occurred.

3. Conclusions of the Existing System are made and the development of the new system is settled to solve the problems. This will be included in the Data Flow Diagrams, and Data Dictionary for the newly developed system.

4. New System Requirements are defined including inputs, outputs and operations.

5. Do budget for the analysis and design and implementation. Cost/Benefit Analysis for the proposed system is considered.

6. After conclusion, Implementation Phase is done to develop programs, test, and implement the New System.

II. EXISTING SYSTEM

2.1 Background of the Organization

While the domestic industries are being developed, steel is playing a more important role in most of the industries. Its importance and demand are so rapidly increasing that nowadays, steel is almost the heart of the construction and industrial realm. LYS Intertrade Co., Ltd. knows this well. It tries its best to carry out the construction and industry developing policy and also tries to use the steel with the most efficiently and advantageously for these purposes.

As a result, LYS Intertrade Co., Ltd. was established in 1978 by the partnership between a Thai and a Chinese Company for importing and distributing a wide variety of standard and quality steel products, supplying the local construction and manufacturing industry. Moreover, it also built a fine international relationship over many years with one of the leading steel product manufacturers, which is located in Shang An, Republic of China for their major products procurements.

According to their good quality and services that support not only existing customers, but also prospected customers, together with the experiences in this business for about 20 years, most of them appreciate their high quality products and services at a reasonable price as well. LYS Intertrade Co., Ltd. then, becomes the stable leading importing and distributing company for construction and manufacturing industry purposes, such as: Vehicles, Parts of Structures, Parts of Electrical Appliance and Parts of Furniture.

In order to reinforce their services in terms of management and quick customer support and to forge closer corporate relations among suppliers and customers, LYS Intertrade Co., Ltd. has announced a plan to implement a number of wide-ranging measures including organizational restructuring and investment in new facilities as a

means to consolidate its business leadership in this area and to expand its operations regionally.

LYS Intertrade Co., Ltd's Policy objectives are to maintain and enhance its business position as the leader in the steel business, with a good reputation amongst both suppliers and customers. Also, it stresses long-term co-operation and mutual respect with their customers and an endeavor to supply products which meet the requirements of the markets and aim to move ahead along with the progress and prosperity of this area. This can be achieved by continuously exploiting state-of-the-art technology, efficient management and teamwork. Also, the outstanding cooperative mission will extend throughout the whole company so that it becomes an integral part of every department. This will focus on maintaining satisfied suppliers, customers and business alliances.

Today, LYS Intertrade Co., Ltd. is able to stand in this position because of all the support and cooperation from their valuable suppliers and customers as per their goal to Satisfy Customer's requirements and Create Mutual Prosperity and Benefit.

2.2 Existing Business Function

Figure 2.1. illustrates the basic structural organization of LYS Intertrade Co., Ltd. It is classically organized into four line departments. The line departments are as follows:

1. Accounting and Finance Department

2. Sales and Marketing Department

3. Administration and Personnel Department

4. Warehouse and Delivery Department

LYS INTERTRADE CO., LTD.

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                    ┌──────────────────┐
                    │ Managing Director │──────┐
                    └──────────────────┘      │
                              │         ┌──────────────┐
                              │         │   Overseas   │
                              │         │   Supplier   │
                              │         └──────────────┘
    ┌─────────┬───────────┬───┴────────┬──────────────┬────────────────┐
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│ Sales &│ │Accounting│ │Warehouse │ │ Computer │ │ Administration │
│Marketing│ │& Finance │ │& Delivery│ │Department│ │  & Personnel   │
│Dept.   │ │Department│ │Department│ │          │ │  Department     │
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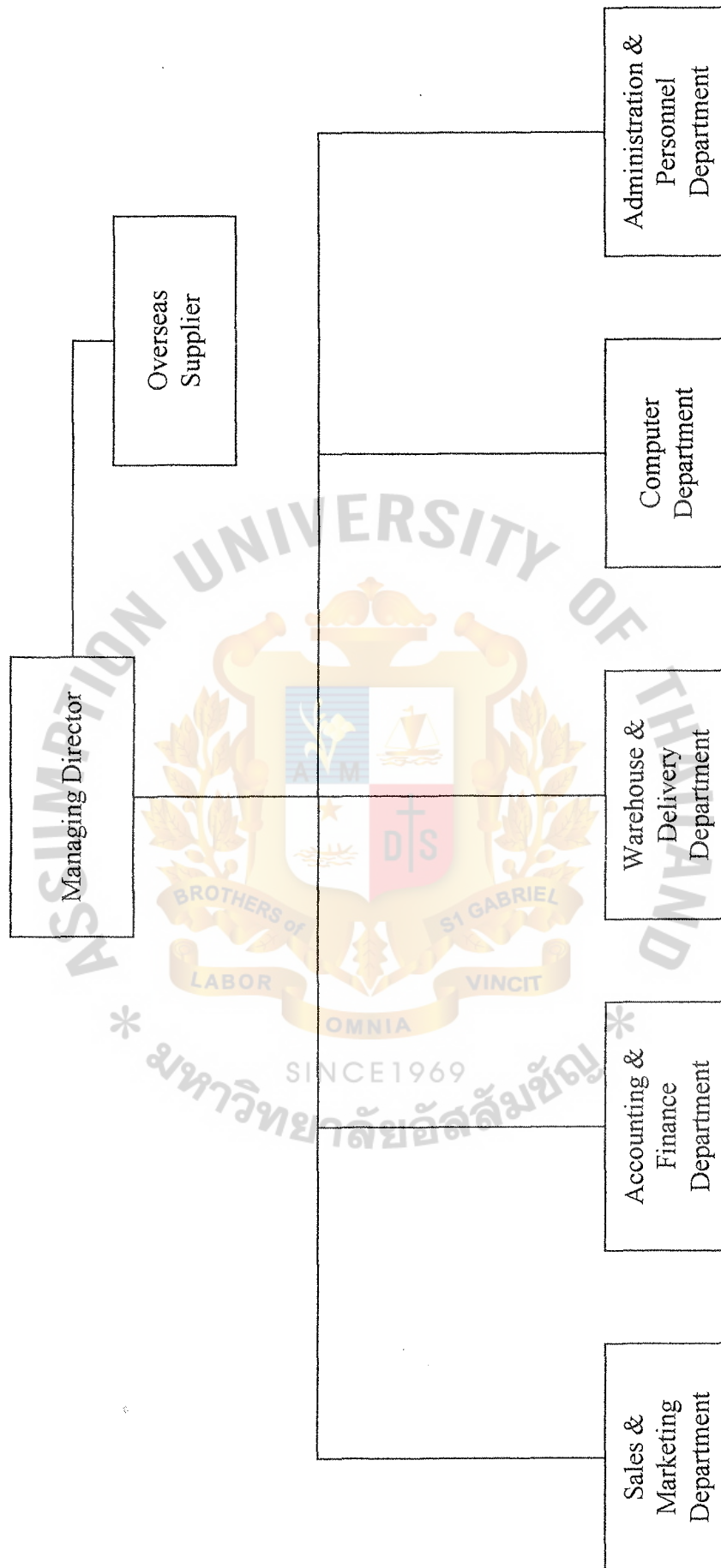
Figure 2.1. Organization Chart of the Company.

All departments' heads have a Department Manager who reports directly to the Managing Director. The corporate staff includes Sales Representatives, Warehouse's Staff, and other support groups which also report to the General Manager.

The functions and responsibilities of each department are briefly described as follows:

Accounting and Finance Department :

1. Recording accounts receivable, collection according to the Customer Sales Orders submitted by the Sales and Marketing Department.

2. Managing cash in hand, bank accounts, cheque writing and cheque reconciliation.

3. Issuing Customer Receipts.

4. Recording account payable, payment according to the Supplier Invoice submitted by the Sales and Marketing Department.

5. Managing monthly payroll payment.

6. Co-ordinating with the Accounting Consultant to form the Annual Financial Statements.

Sales and Marketing Department :

1. Selling of Steel Products and preparing of Customer Orders submitted to the Warehouse and Delivery Department.

2. Checking the products ordered after the Warehouse and Delivery Department has prepared them already.

3. Reordering the products which are out of stock.

4. Checking and accepting those returned products from customers.

9

Administration and Personnel Department :

1. Responsible for all administration jobs and human resources acquisition.

2. Support all administration jobs and keep all smooth to achieve the company's goals and objectives.

Warehouse and Delivery Department :

1. Receiving of Products from Suppliers

    -   Checking Suppliers' Invoice and Delivery Order and passing them through the Accounting and Finance Department.

    -   Checking Products ordered.

    -   Put products into Warehouse.

2. Returned Products from the Sales and Marketing Department

    -   Checking products returned from customers, which have passed through the Sales and Marketing Department.

    -   Putting products into the Warehouse.

3. Pulling Out Products from the Warehouse and Delivery Department which are being sent to Customers

    -   Pulling out products as listed in the Customer Sales Order and passing them through the Sales and Marketing Department for total checking.

    -   Packing the products ordered by the customer mostly by the Transportation Service Company and sometimes by the Warehouse and Delivery Department's Staff.

4. Returned Products to Suppliers:

    -   Returning damaged products or mis-ordered products that the company didn't order.

5. Daily checking which products are out of stock :

    - Issuing the reorder request and submitting them to the Sales and Marketing Department.

6. Checking total stock every six months in the Warehouse.

2.3 Current Problems and Areas for Improvement

Existing Problems :

The company in the past 3 years had a growth rate of expansion in the number of customers and imported products. There are various products to serve the customers' demands. So the problem of this company is to find the sales channel to increase sales volume to maximize profit.

Despite of the rapid expansion, the operations are done manually. All computers stand-alone, and are used for preparing reports and worksheets. There are many errors in calculation and slow reports of inventory, invoicing and selling transactions. Also, there is an inability to keep track of customers. Management does not get the reports in time or correctly. They can not making correct plans or make the right decision.

The Areas for Improvement :

The improvement areas of systems can be defined as changes that will result in incremental yet worthwhile benefits. For the Sales Information System for LYS Intertrade Co., Ltd., there are many possibilities for improvements, which include:

1. Speeding up the process to reduce both time and documents.

2. Reducing errors in input for improving the information accuracy and data integrity.

3. Reducing the staff workload by using a computer system.

4. Improve the good quality of service and fast response to customers.

III. THE PROPOSED SYSTEM

The proposed system will provide the Sales and Marketing Department with a computerized information system instead of a manual system and will also provide several benefits to both operational level and the management as well.

The benefits for operational level:

- To improve the working method.

- To reduce the redundant processes.

- To create better services and increase the degree of effectiveness among the staff of the Sales and Marketing Department.

The benefits for the management level:

- To provide existing information but more rapid or immediate access to data which is not fully activated at this moment.

- To provide more up-to-date information instead of the previous month-end or 6 months-end.

- To provide more accurate information either in terms of arithmetical accuracy or in terms of being more closely representative of the real world.

An enhancement of an other computerized system would be considered further.

3.1 User Requirements

In the process of gathering information in order to design a proper system that can satisfy the user, requirements are usually obtained from the users themselves and the existing system evaluation. Actually, the existing system can serve the user requirements to some extent. But users still need further development for more system functions as well as improvement within the existing system operating scope. The main development and improvement includes database storage, report production, query capability, and security, etc.

12

The user requirements are concluded as per the following items:

- To increase and improve customer satisfaction and services.

- To reduce overall operation cost in every departments.

- To reduce human error which may occur and lead to waste of time and money.

- To be able to check errors that occur during the operation of the program.

- To improve the speed of retrieving the data and information.

- To calculate the data accurately and quickly.

- To generate customized reports as preferred by each department.

- To generate the various reports which support the management.

- To provide security and operation control.

- To share the information in every departments.

- To provide a friendly and graphical user interface.

1. Input Requirements :

The input requirements are the information that must be input into the system to get the needed information, which is shown as follows:

- Customer Details: Customer Details contain the details of customers, such as customer id, customer name, address, contact name, phone number, fax number, payment terms, etc.

- Product Details: Product Details contain the details of products, such as: product code, product name, specification, product description, price, etc.

- Supplier Details: Supplier Details contain the details of suppliers, such as: supplier id, supplier name, address, contact name, phone number, fax number, payment terms, lead time, etc.

- Customer Order Details: Customer Order Details contain the details of customer orders, such as: customer id, customer name, customer address, customer order number, product id, product name, quantity, unit price, total amount, payment terms, etc.

- Purchasing Details: Purchasing Details contain the details of purchasing, such as: supplier id, supplier name, P/O number, product id, product name, specification, quantity, unit price, total amount, payment terms, shipment date, etc.

- Sales Order Details: Sales Order Details contain the details of sales order, such as: sales order id, customer name, address, contact name, product code, quantity, delivery date, etc.

- Quotation Details: Quotation Details contain the details of quotation, such as: quotation number, customer name, address, contact name, product code, product name, quantity, unit price, total amount, payment term, etc.

2. Output Requirements :

The output requirements are the information that must be the result from the input requirements that can generate the various reports which support the management for better and proper decision making. The various reports are as follows:

- Purchase Order: Purchase Orders are documents that are provided by the company to the suppliers that contain product code, product name, specification, product description and quantity that the client wants to purchase.

- Sales Report: Sales Report provides the details of sales information, such as the total sales amount from period of time to period of time.

14

- Inventory Report: Inventory Report provides the details of products that are available in the warehouse.

- Customer Order Report: Customer Order Report provides the details of customers' orders classified by product details, customer details and outstanding orders.

- Sales Order Summary Report: Sales Order Summary Report provides the details of the Sales Representatives' job, customer name and status of the order.

3.2 System Design

The proposed system would focus on the design of a Sales Information System from the beginning stage: receive order from the customer, generate and print invoice, deliver products to the customers and receive customers' payments. A sales Information System has been designed to achieve the following:

- Computerize the Sales Information System from the existing manual system to improve productivity.

- To manage and control the payment from customers.

- To monitor and control Sales and Marketing Activities.

- To generate various reports to cope with forecasting planning activities.

1. Database Design :

Database Design seeks to develop a detailed description of a database that will meet the needs of all users and have application processes that can be used now or in the future. The objectives of the database design are:

- The data has to be available when the user wants to use it.

- The data must be accurate and consistent.

- The efficient storage of data as well as efficient updating and retrieval.

15

- The information obtained from the stored data must be in a form useful for managing, planning, controlling, or decision making.

The proposed database system will be created and maintained to provide several benefits, and all details are shown as below:

- Reduce data duplication and redundancy.

- Improve data quality, data shareability, so that anyone in the system can access the same information at the same time.

- Improve data control with more consistency in data descriptions.

- Increase data accessibility for users to extract needed information from the data resources.

- Improve the performance of data resource; utilize the physical computer resources with efficiency.

- Improve data security and preventing unauthorized access to data.

2. Software Design

In order to select the best software design for company, the following qualities of software need to be considered:

- Software should be user friendly, so the user can interact with it easily, and also it should not take a long time for the user to master the system.

- Software should be easy to understand, with no intricacies to understand the program, and it also should require a minimum number of key presses to call up the desired screen.

- Software can be evolved according to the future requirements of the user.

- Software should reliable, so users can depend on it.

16

Modularity

A system that is composed of modules is called modular. Modularity is the single attribute of software that allows a program to be intellectually manageable. The modular technique is intended to simplify the task of developing large programs or systems. Before coding starts, programs are divided up into a number of self-contained logical sections or modules. Each of these is developed and tested separately (using a test harness which supplies test data and simulates the other modules with which it interacts), then the modules are progressively assembled together until the complete program has been built up.

The following properties are important for modules:

1. Modules should be highly cohesive; that is, each module should accomplish one and only one function. Theoretically this makes the modules reusable in future programs.

2. Modules should be loosely coupled; that is, modules should be minimally dependent on one another. This minimizes the effect that future changes in one module will have on other modules.

Modularity, achieves three goals in practice: the capability of decomposing a complex system, of composing it from existing modules, and of understanding a system in pieces.

A system that was developed based on modularity can assure that:

1. Each function and each abstraction has a single, well-defined purpose.

2. It is easy to identify all routines that share a major data structure.

This approach enhances design clarity, which in turn eases implementation, debugging, testing, documenting, and maintenance of the system.

Top-Down Approach

The new computerized system is typically based on a Top-Down Approach. This begins with the whole, progressively breaking this down into smaller units to eventually define in full detail. Computer-based systems are often designed in this manner. The reverse approach is known as bottom-up. As the system progresses, the system is decomposed into subsystems. It provides an orderly and systematic framework for the system

3. Output Design

The output design is required reports and screens that generate information for reporting. Output design is usually considered the first step in system development whereby the programmers communicate with the users for the information required. These reports are based on user requirements for daily operation or for analysis.

The objectives of Output Design are:

- To convey information about the past activities, current status, or projections of the future.

- To show the signals of important events, opportunities, problems, or warnings.

- To trigger and confirm an action.

Methods of output design are Hard Copy of printer reports.

Screen Design

It is at this step that the logical model of the new system is converted to the physical model of the new system, e.g. How information is to be arranged on a display screen used for a particular purpose, such as to enter a particular type of sales transaction. The format shows the fixed descriptive text or other information provided to guide the user, and identifies the areas on the screen into which data may be entered.

18

Where a mouse is used, the format may also include control fields such as buttons or pull-down menus.

The logical designs of the new system, such as data flow diagrams, are converted to the physical model of Screen Design. The use of the screen design is handled by the Menu Selection. The Main Menu for the Sales Information System is designed. The submenu for each selected menu is designed in order to view the reports on the screen, as well as print them on the printer. Users can add, edit, modify and delete the data according to his or her requirements.

Report Design

The greatest demand of the users is to get output reports. Therefore, report designing is a real vital issue of this project. These reports mostly concern information extracted from transaction processes. By summing up figures and comparing among entities, the information can indicate the status of entities in the company. Performance is evaluated. Eventually, reports provide sources for management to plan or do strategic decision.

The criteria of making good reports includes such factors as the right amount of reports, at the right time with the right amount of information to the right people. The reports have an element of performance that has a significant bearing on the goals of the area receiving the reports. The system puts out reports that are timely and relevant. The reports appear in a format that is easy to understand and expressed in the language of the user's report.

Each report begins with a report header or a report title that identifies the report. Other identifiers, such as the date and the sales representatives or department responsible for compiling the report, are often included in the report header.

The body of the report is divided into an imaginary grid of columns and rows (or lines). Column headers near the top of each page or screen identify the field displayed in each column. Each row holds a single detail line that displays the appropriate field values from a single report file record.

The data that are used to generate a report are usually sorted or indexed by one or more key fields. A change in the value of the key field is called a control break. When the control break occurs a summary line can be printed. Summary lines typically hold a count of the number of records of the sums of selected fields in the control group, or both.

Accurate and up-to-date information achieved through reports is the major purpose of this system. The amount of information to be displayed on each report has been designed from the management point of view.

4. Input Design

The input design usually requires many sources of information to generate information for output or reports. For LYS Intertrade Co., Ltd. to have well-designed input forms and visual display input forms and Visual Display Terminal (VDT) Screens, they should meet the goals of effectiveness, accuracy, ease of use, consistency, and attractiveness. The type of input is forms and Visual Display Terminal (VDT) Screens.

Good Form Design

To design form is an important technique. The company that designs good form can make their jobs easier. Also, forms are important instruments for steering the course of work. By definition, they are preprinted or duplicated papers that require people to fill in responses in a standardized way. To design good form, the following four guidelines are needed:

- Make forms fill out easily.

- Ensure that forms meet the purpose for which they are designed.

- Design forms to assure accurate completion.

- Keep forms attractive.

Good Screen Design

To design the screen is another important factor. The screen displays a cursor, which continually orients the user. The following four guidelines are important to design the Visual Display Terminal (VDT) screens:

- Keep the screen simple.

- Keep the screen presentation consistent.

- Facilitate user movement among screens.

- Create an attractive screen.

3.3 Hardware and Software Requirements

LYS Intertrade Co., Ltd.'s existing computer system is a manual system, with no network set up in the office. Moreover, all PCs work as a standalone. Therefore, the company needs to set up a network for the whole company.

The following are the hardware and software requirements for the proposed system for the company to expedite their work:

Hardware Requirements

The Hardware Requirements can be summarized as follows :

1. File Server   1   Unit

- Compaq Presario 5726

- Intel Pentium II 300 Mhz, 128 KB External Cache

- 1.44 MB Floppy Disk Drive

- 8.1 GB PCI-2 Hard Disk with PCI Controller

21

- PCI/EISA Bus Architecture
- 40X CD-ROM Drive
- VGA Card 1 MB PCI
- 2 serial, 1 parallel, and 1 mouse port
- Super VGA Color Monitor 17"
- Keyboard 104 keys, Mouse
- 10/100 Mbps Network Interface Card

2. PC Workstation   8   Units
- Compaq Presario 5346
- Intel Celeron 366 Mhz, 64 MB SDRAM
- 1.44 MB Floppy Disk Drive
- 4.3 GB Hard Disk Drive
- VGA Card 2MN PCI
- Super VGA Color Monitor 15"
- Keyboard and Mouse
- 10/100 Mbps Network Interface Card
- 40X CD-ROM Drive

3. Network Peripherals
- D-Link Ethernet Stackable Hub, 10 ports   1   Unit
- HP Jet Direct Print Server ExPlus 3,2,Serial Ports   1   Unit

4. UPS
- POWERGUARD PE-1,250 (30 mins.)   1   Unit
- POWERGUARD PE-600 (15 mins.)   8   Units

5. Printer
- HP Laser Jet 4 P   1   Unit

- HP Desk Jet 1600 C	1	Unit
- Dot Matrix Epson LQ1170	1	Unit

6. Tape Backup

- HP Sure Store Tape 2000I k GB,	1	Unit

7. Wiring Job (Network Points)   10   Points

- Cat, 5 UTP Cable

- RJ-45 Connectors

- RJ-45 Wall Plate

The figure 3.1. shows the network configuration of the proposed system

Software Requirements

In order to fulfill the objectives, the following software requirements are recommended:

- Operating Systems (OS)   Microsoft Windows 98

- System Development Software   Office 97 Professional (Thai License)

- Network Operating System (NOS)   Novell NetWare 4.11 (10 users)

3.4   Security and Controls

Generally, a successful new system in today's sophisticated, rapidly changing business environment must be built upon a solid business process of preparation and accounting controls. The management of a firm is responsible for establishing and maintaining adequate internal controls. In fact, the establishment and maintenance of such a system of internal controls is a significant management obligation.

One of the most important considerations in the development of the system operation is security and controls. Security in computing is a very vital issue. The company that has full and complete security and control, has an advantage over the other companies.

23
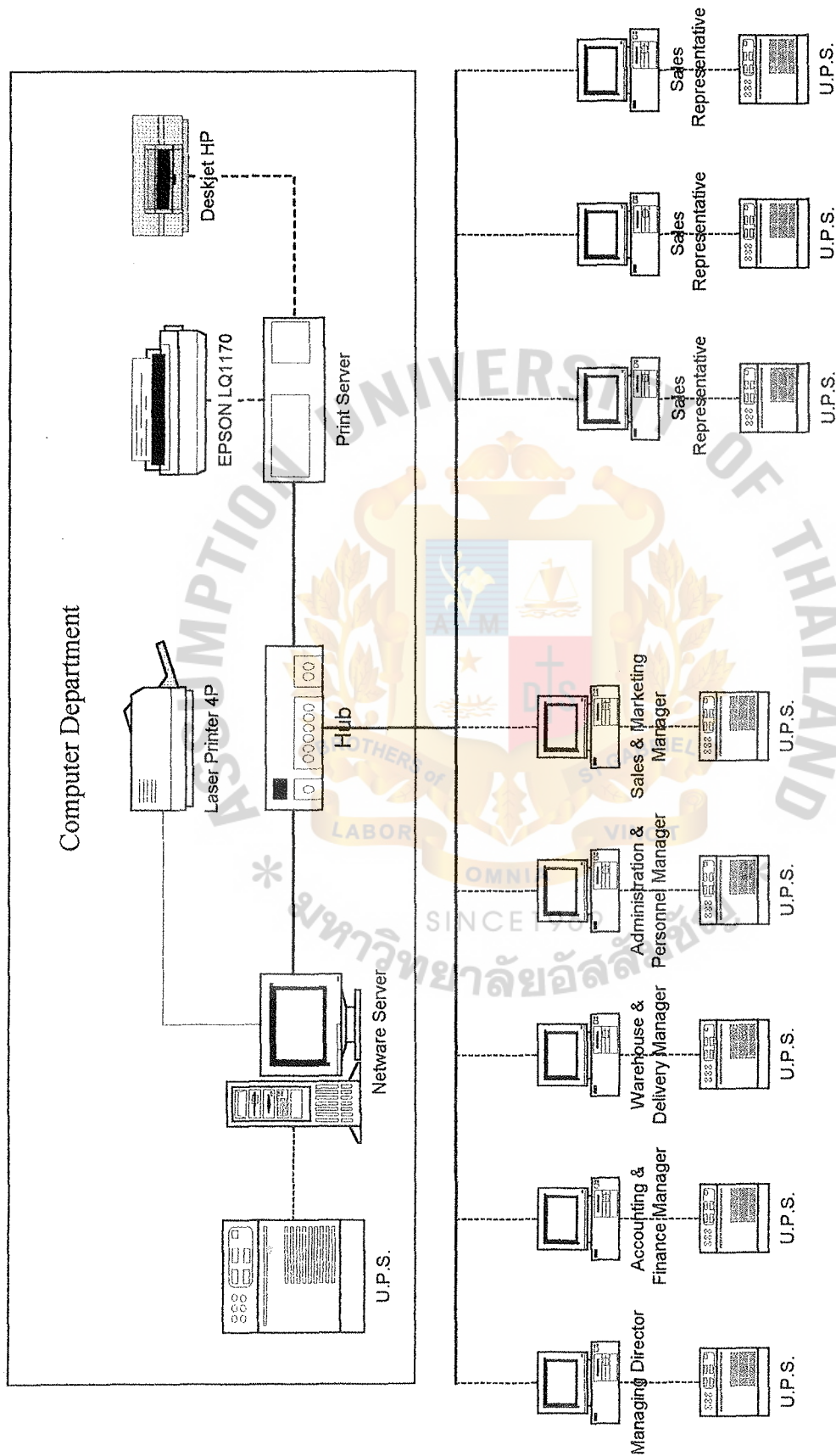
Figure 3.1. Network Configuration of the Proposed System.

24

Only someone who has a password and is given authorization codes can operate the program. The user authentication and manipulation should be implemented so that the secrecy, integrity, and availability of the assets of the computing system are accessible, modified, and available only to the authorized parties.

To cope with the security and controls for LYS Intertrade Co., Ltd., the following proposed methods are recommended:

- Authorized persons only have physical access to the system. A password is provided into the program for the users to have access to certain sensitive areas in the data.

- Hardware and Printer should not be left unattended when it is printing any information. The computer hardware must be locked in the office at office closing time, and an authorized person should keep the key.

- All application programs should be copied to diskettes and kept in a safe and secured place. A backup process should be performed at the end of each day. Backup copies should be created every time the database is updated or modified.

- Ensure the authorized persons signs source documents such as Invoices, Purchasing Orders, etc.

- To prevent loss of data during a power failure, an UPS (Uninterrupted Power Supply) is recommended.

- The distribution of reports should be controlled to ensure that they are sent to the proper destination or right person.

- Using backup diskettes can ensure the recovery of data.

- Only an authorized person must make data Entry, Modification and Corrections.

3.5 Cost Comparison and Benefit Analysis

Usually, in any company, when a new computerized system has been developed and proposed, the following two costs will be examined: Direct Costs and Indirect Costs. Also, LYS Intertrade Co., Ltd. is ready to accept the following costs that may occur:

Direct Costs

- Computer hardware and software application equipment.

- Communication hardware equipment.

- Common carrier line charges.

- Costs for backup equipment of system in case of failure

- Costs of manually performing tests during a system outage.

- Facilities costs i.e. space requirement, electricity, offices, etc.

- Spare parts cost as necessary.

- Maintenance costs for hardware and software.

- Costs for the development person from hardware/software house.

- Development and performance of acceptance test procedure costs.

- Development of documentation costs.

Indirect Costs

- Personal training.

- Transformation of operation procedure.

- Development of support software.

- Disruption of normal activities.

- Increased system outage rate during initial operation period.

1. Cost Analysis

In the Cost Analysis issue, there are three major cost categories that are concerned. These consist of Investment Cost, Implementation Cost and (Annual) Operating Cost.

Investment Cost

To analyze the cost analysis, Investment Cost is the first direct cost that is concerned with the Hardware and Software Requirements Costs, which are required for the company according to the new proposed system. The following criteria is considered to select the types of hardware and software:

- Speed according to the nature of work.

- Amount of space required.

- Future expansion

- Computer system life cycle

- Computer Technology.

The above captioned criterias are varied based on the Information Technology as well as the New Computer Technology. However, to use with the LYS Intertrade Co., Ltd., to pay more attention to the users' knowledge, skills and experience in the computers and business, those are necessary for making decisions to choose the hardware and software for the company.

The following is the hardware and software's solution that had been chosen for the management and users according to the new proposed system requirements. That will be invested in the hardware and software's solutions to be implemented in this company.

27

Table 3.1.   New Proposed System Requirements, in Baht.

Description	Unit Price	Q'ty	Total
- File Server (Compaq Presario 5726) Pentium II 300 Mhz, 128MB SDRAM, 8.1 GB	65,000.00	1	65,000.00
- PC Workstation (Compaq Presario 5346) Celeron 366 Mhz, 64 MB SDRAM, 4.3 GB	40,000.00	8	320,000.00
- Network Peripherals			
D-LINK Ethernet Stackable Hub, 10 ports HP	5,000.00	1	5,000.00
JetDirect ExPlus 3 Printer Server,2 Serial ports	4,000.00	1	4,000.00
- UPS			
POWERGUARD-PE750, 1,250 VA, (30 mins.)	6,000.00	1	6,000.00
POWERGUARD-PE250, 500 VA, (15 mins.)	2,500.00	8	20,000.00
- Printer			
HP LaserJet 4P	35,000.00	1	35,000.00
HP DeskJet 1600 c	15,000.00	1	15,000.00
Dot Matrix, Epson LQ1170	20,000.00	1	20,000.00
- Tape Backup (3 M)	5,000.00	1	5,000.00
- Wiring Job (UTP Cable,RJ-45 Connector & Wall Plate)	(1 Set)	1	3,600.00
- Software			
Novell NetWare 4.11 (10 Users) CD-ROM	50,000.00	1	50,000.00
Windows 98 Thai License, CD-ROM	10,000.00	1	10,000.00
Office 97 Professional, (Thai License) CD-ROM	15,000.00	1	15,000.00
Grand Total			573,600.00

28

Implementation Cost

It is usually a one-time outlay to create and install the new proposed system. It includes an application software program of technical service system development cost, System Design and Programming Cost together with the Staff Training for increasing their skills for the new proposed system.

Operating Cost

It is a kind of supporting cost to use with both the existing and the proposed system, including software maintenance, stationery, toner cartridges and also software license fees which are needed at the present.

2. Benefits Analysis

The benefit of Sales Information Systems is reflected in the proposed system after the implementation has been utilized. It may be seen that at the beginning stage, the existing manual system cost is less than the proposed system. But in the long term, the proposed system will provide some tangible and intangible benefits. Details are shown as follows:

Tangible Benefits

- Reduction of time for staff workload	90,000	Baht/year
- Reduction materials due to doubling filing	72,000	Baht/year
- Reduction of paper works	60,000	Baht/year
- Reduce the stationery cost	50,000	Baht/year
- Reduction of assets loss	80,000	Baht/year
- Reduce cost caused by imported products	55,000	Baht/year
	407,000	Baht/year

Intangible Benefits

- Increase and improve operation efficiency and productivity.

- Provide accurate, timely and shared information, efficient management control

- Reduce some manual operations and decrease human errors.

- Prepare various kinds of short/long term reports.

- Ability to generate reports for the requested period.

- Prevent loss of information and Protect information from unauthorized person

- Improve quality and service performance among the customers and the staffs.

- Reduces volume of paper to be produced and handled.

- Reduce data redundancy, collection time and operation cost in long term.

- Improved decision-making process by providing on time accessibility to information.

- Creating a good image of using new technology for the company

3. Cost/Benefit Analysis

Generally, to develop the proposed system is a long-term investment which represents sizable outlays of fund that commit a company to some course of action, so procedures are needed to analyze and select it properly. Attention must be given to measuring relevant cash flow and applying appropriate decision making techniques. Capital budgeting is the process of evaluating and selecting long-term investments consistent with the firm's goal of owner wealth maximization.

The Payback Period Analysis and the Break-even Point Analysis are the most two popular tools to evaluate this issue.

30

Payback Period Analysis

Payback Period Analysis determines the exact amount of time required for the firm to recover its initial investment as calculated from cash in flows. The payback period formula is shown as follows:

$$P = I / (1-T) R$$

Where
P = Payback Period (Year)

I = Initial Investment or Capital Expenditure

T = Corporate Tax Rate in Percentage (30%)

R = Annual Saving Realized by Investment

Payback Period = 573,600 / (1-0.3) 407,000

= 2.0 Years

Break-even Point Analysis

Break-even point is a tool that is the most important way to measure and evaluate between the existing and the proposed system in terms of the representing the optimal cost of investment. The purpose is to determine returns in terms of cost investment.

The first year costs of the proposed system will be considerable because of the hardware and software installation. In the second year and in later years, the cost will decrease slightly and continuously. Maintenance cost is estimated to be 10% of the hardware cost and will increase approximately 10% per year.

The promotion rate for staff rises approximately 12% per year and the inflation rate and annual operation cost of the existing system will increase around 7% per year.

The result, as Table 3.1. and Table 3.2.shows, is that the cost of the proposed system will be higher than the existing system's cost in the first year, but when we study the following year, the cost is consecutive. The cost of the proposed system will be less and less than the existing system.

31

Cost Comparison between the Existing System and Proposed System

Table 3.2.   Total Cost of the Existing System, in Baht.

Cash Flow Description	Year :				
	1	2	3	4	5
1. Investment Cost	0	0	0	0	0
2. Implementation Cost 10%	0	0	0	0	0
3. Maintenance Cost 10%	0	0	0	0	0
4. Operation Cost 7%	550,000	588,500	629,695	673,774	720,938
5. Salary per Year 12%	400,000	448,000	501,760	561,971	629,408
Total Cost	950,000	1,036,500	1,131,455	1,235,745	1,350,346
Accumulative Cost	950,000	1,986,500	3,117,955	4,353,700	5,704,045

Table 3.3.   Total Cost of the Proposed System, in Baht.

Cash Flow Description	Year :				
	1	2	3	4	5
1. Investment Cost	573,600	0	0	0	0
2. Implementation Cost 10%	100,000	110,000	121,000	133,100	146,410
3. Maintenance Cost 10%	100,000	110,000	121,000	133,100	146,410
4. Operation Cost 7%	185,000	197,950	211,807	226,633	242,497
5. Salary per Year 12%	300,000	336,000	376,320	421,478	472,056
Total Cost	1,258,600	753,950	830,127	914,311	1,007,373
Accumulative Cost	1,258,600	2,012,550	2,842,677	3,756,988	4,764,361

32
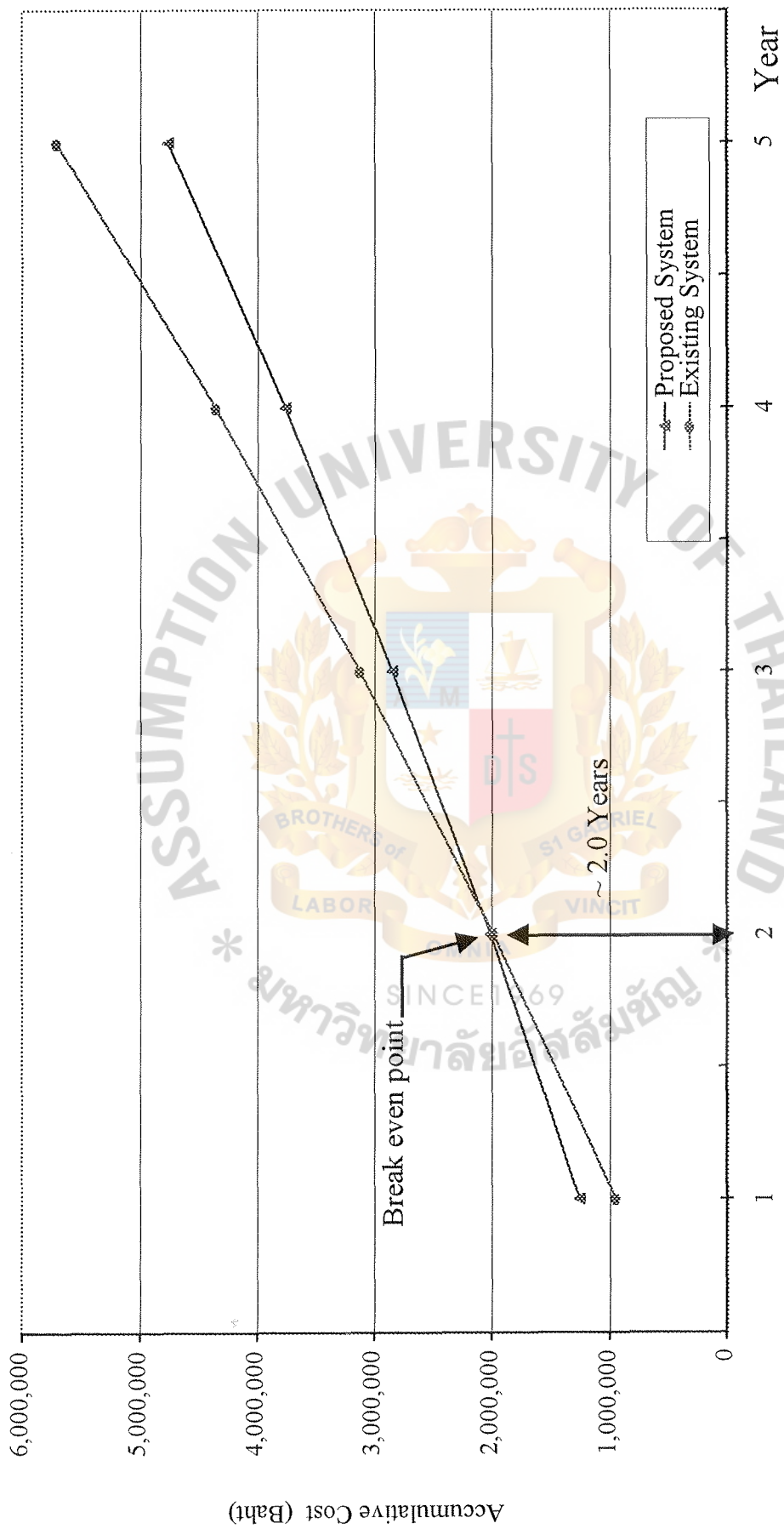
Figure 3.2. Cost comparison between Existing System and Proposed System.

33

IV. PROJECT IMPLEMENTATION

4.1 Overview of Project Implementation

The implementation of the project will start after the management's decision to accept the new proposed system and also it will be set up using the parallel running concept. By this concept, the business process will keep working on both the existing manual system and the new proposed computerized system for a number of cycles until the results of the new system have been proved. By the way, to use this concept, a lot of time will be spent in this period for the users who perform double jobs each day. But finally, they will be familiar with the new system.

The implementation of the project consists of the installation of the computerized system, programming, testing, and training for the new system. It is also concerned with hardware, software, and peopleware. The table 4.1. shows the projected schedule that is represented in the Gantt Chart which enables the company to analyze their manpower more efficiently and effectively.

4.2 Stages of Project Implementation

Project implementation consists of five stages, which are separated and distinct tasks that must be performed in sequential order.

1. Programming

The programming is the stage in which application programs are written in order to perform whatever business processes are being computerized. The programming is developed from the program flowchart and data flow diagram. Each module of the program is debugged again so that the system of the program can operate as a complete application system. The programming for the Sales Information System for LYS Intertrade Co., Ltd. is written in Microsoft Access.

34

Table 4.1.   Project Implementation Schedule.

ACTIVITIES	MARCH 1	MARCH 2	MARCH 3	MARCH 4	APRIL 1	APRIL 2	APRIL 3	APRIL 4	MAY 1	MAY 2	MAY 3	MAY 4	JUNE 1	JUNE 2	JUNE 3	JUNE 4	JULY 1	JULY 2	JULY 3	JULY 4	AUGUST 1	AUGUST 2	AUGUST 3	AUGUST 4
1. System Analysis																								
1.1 Gather Information of an Existing System	■	■																						
1.2 Identify Working Process of an Existing System			■																					
1.3 Develop Data Flow Diagram of the Existing System				■																				
1.4 Identify Contents of Flow and Data Stores					■																			
2. DETAIL ANALYSIS AND DESIGN																								
2.1 Gather Information of Users' Requirement						■	■																	
2.2 Develop Data Flow Diagram of the Proposed System							■	■																
2.3 Identify the Contents of Flow and Data Stores									■	■														
2.4 Data Dictionary										■	■													
2.5 Hardware & Software Requirement											■	■												
2.6 Economic Cost Comparison												■												
3. IMPLEMENTATION																								
3.1 Programming Specification														■	■									
3.2 Screen Layout																■								
3.3 Report Design																	■	■						
3.4 Data Conversion																		■	■					
3.5 Testing																			■	■				
3.6 Implementing																				■	■			
3.7 Documentation																						■	■	

35

2. Testing

In this stage, testing is the process of executing a program with the intent of finding errors and testing to make sure it performs satisfactorily. Test data is created by inputting data into the system and running the program in order to test all possible situations that might occur in the future. The testing activity encompasses everything that makes up the system: hardware, software, end users, processes and data.

Testing can be explained more in terms of:

- Programming Testing

  In programming testing, each module of the program is tested to make sure that it performs satisfactorily. Test data is created and inputted into the system and the program is run in order to test all possible situations that might occur in the future.

- System Testing

  The objective of entire system testing is to ensure that users have adequate documentation to run the system, to ensure that the users are able to input the data properly and to ensure that the overall system flow works properly as well. The concept of system testing is to ensure that the entire system functions as a whole.

3. Installation

At the installation stage, the overall system is run using the program, interface with different files of data, utilization and telecommunications networks, and interface with the users.

To get the most benefits during the project implementation, the following basic principles are recommended:

- Try to avoid disrupting the day-to-day business activities during implementation process.

- Excessive overtime work during implementation is really not required.

- Inform management of all changes in the implementation method or time schedule.

- Do not give demanding orders, you are functioning as advisory staff, not as a line manager.

4. Training

The training Stage is also an important job and is a must because the user will run the system correctly when they understand it well. End users are usually introduced to the functionality of new system via a one-to-one and/or a group lecture training program.

Even well designed and technically elegant systems can succeed or fail because of the way they are operated and used. Therefore, the quality of training received by the personnel involved with the system in various capacities helps or hinders, and may even prevent, the successful implementation of an information system. Those who will be associated with or effected by the system must know in detail what their roles will be, how they can use the system, and what the system will or will not. Both Systems Operators and Users need training.

- Systems Operators

  The systems Operators need to ensure that they are able to handle all possible operations, both routine jobs and extraordinary jobs.

- Users Training

  Users Training helps the users to be familiar with the processing system and to use the application.

37

The training will be provided by the computer/software in vendors in either classroom training or on-the-job training.

The details of training program need to cover the following topics:

- Objective and Scope of the new proposed system.

- The difference between the existing manual system and the proposed computerized system.

- Overview of the new system operation and procedures.

- Organization and use of the system's user manual and help screens.

- Duties and responsibilities of the end users.

- Demonstration of the system.

- An Introductory hands-on walks through of the system.

- Familiarization with the system, i.e. practices using the system with the test data.

5. Documentation

At this stage, Documentation of the system will help the programmers as well as the users to maintain the system and continue the further development in the future. Also, Documentation will be divided into 2 types of documents:

- Users' Guide

  The details of the users' guide describes the methods to prepare and how to use the proposed system in each screen.

- Programming Guide

  The details of the programming guide describe the flow of the system and the data dictionary.

V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The purpose of this system development project is to analyze, design and implement a Sales Information Systems for LYS Intertrade Co., Ltd. – the partnership company between Thai and Chinese companies for importing and distributing a wide variety of standard and quality steel products, supplying the local construction and manufacturing industry.

Most of the products sold are imported from Mainland China. The products will be ordered once the Sales and Marketing Department has checked and found that stock is not available in the Warehouse. The management considers about the potential market and competitors because of the high margin and high competition among the distributors of steel products. Therefore, the management decided to increase sales volume, increase the quality of service to the customer and expand the sales channels to the prospected customers in the local construction and manufacturing industry. But there are some problems in the existing system which cannot serve the expansion of the business:

- All operating jobs are done manually.

- All computers are stand-alone; no network is set up in the company.

- Existing computers' duties malfunction when preparing reports and worksheets.

- Customers' Satisfaction is decreased: customers' services, customers' responsiveness in inquiries, quotation, invoices, and reports, etc.

According to all the above reasons, the management cannot make decisions at the right time about the sales channels, marketing strategies, and the performance of the sales executives' jobs.

Therefore, Sales Information Systems for LYS Intertrade Co., Ltd. is good method that can be used to solve those problems. To implement the proposed system, requires a high budget, but it can give the efficiency to pose the company in the top rank of their business. Due to its speed and accuracy, the company can reduce total cost and time consumption. Moreover, it will reduce the workload of manpower, meet the users' objectives and will meet and increase the customers' satisfaction with the fast response and high performance of the service.

5.2 Recommendations

Although the LYS Intertrade Co., Ltd. is quite successfully developed, there are still some modifications needed to keep the system working effectively and to fit the organization's changing needs and nature. The management should act as the arrowhead to follow up with all user comments and lead them to be familiar with the new proposed system. Management must also be able to forecast the orders which the customers are going to place in the near future, and the orders that the company will place to the overseas supplier. In addition, the best implementation plan and conversion plan are the main factors to ensure that the system will be done successfully as well.

Anyway, in order to make the proposed system more concrete and beneficial in the future, the following recommendations should be adapted to the company as well as the managements' visions and strategies:

- The company needs to set up their policy to use the new computerized system.

- LAN (Local Area Network) is recommended to increase and control database sharing, information exchanging among users.

- The Sales and Marketing Department is the first department that needs to be trained and well educated about how to utilize the proposed system. Also,

40

they must have a plan for developing the other departments' systems to be computerized, in order to improve and increase the company efficiency and effectiveness.

- To take new telecommunication technologies to adapt in the business world are good suggestions, in order to increase the advantages and productivity of the company in the future. Internet Technology, Work Group Information System or Lotus Notes should be considered and recommended.

- There are some functions and modules that could not solve the Y2K Problems, that may make some problems for our database. But to solve these problems by updating and replacing the new proposed system by using Microsoft Office 2000 Packages will be the best solution. More new modules and functions will increase the capacity of the company as well.
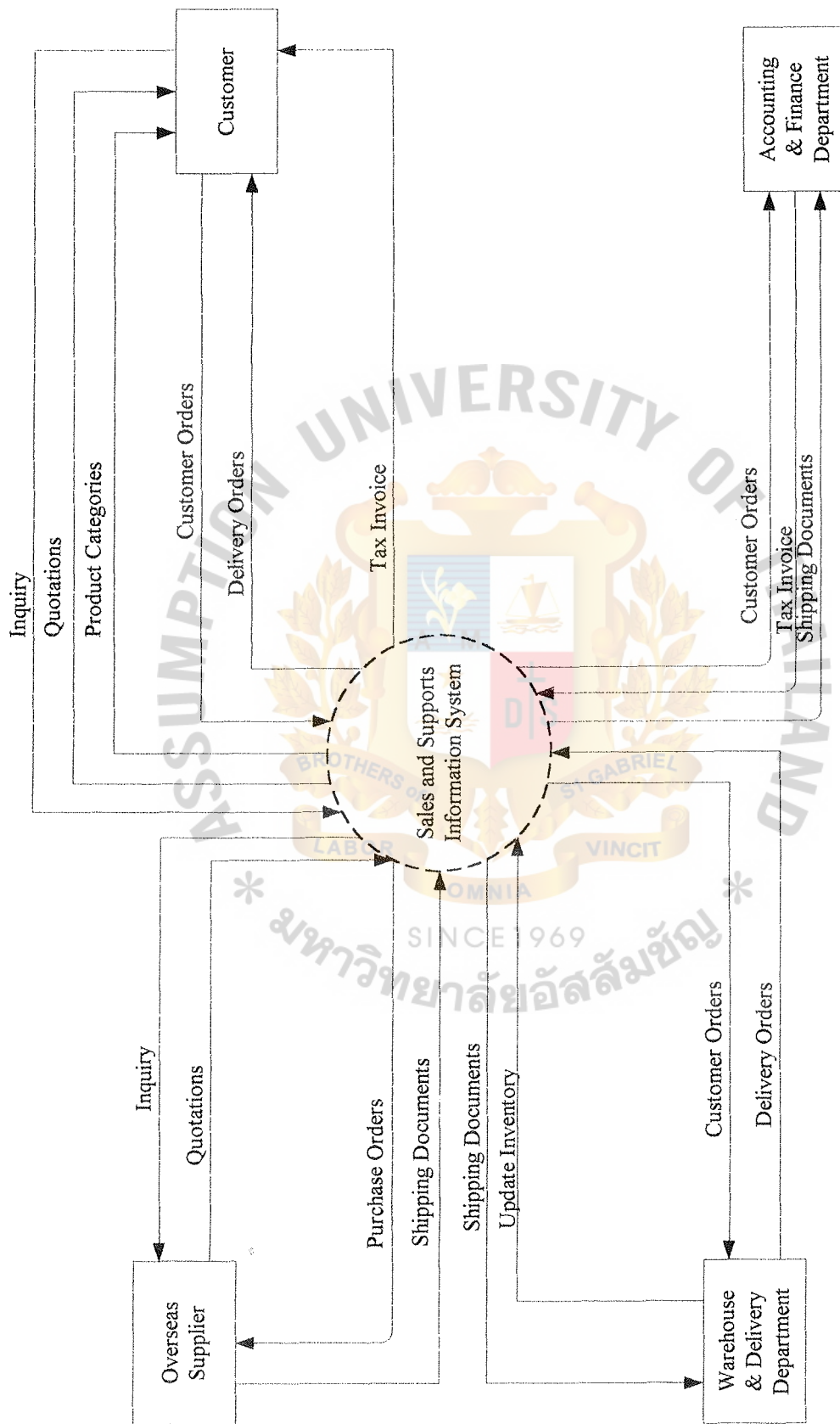
APPENDIX   A

CONTEXT DIAGRAM

Figure A.1. Context Diagram Existing System.
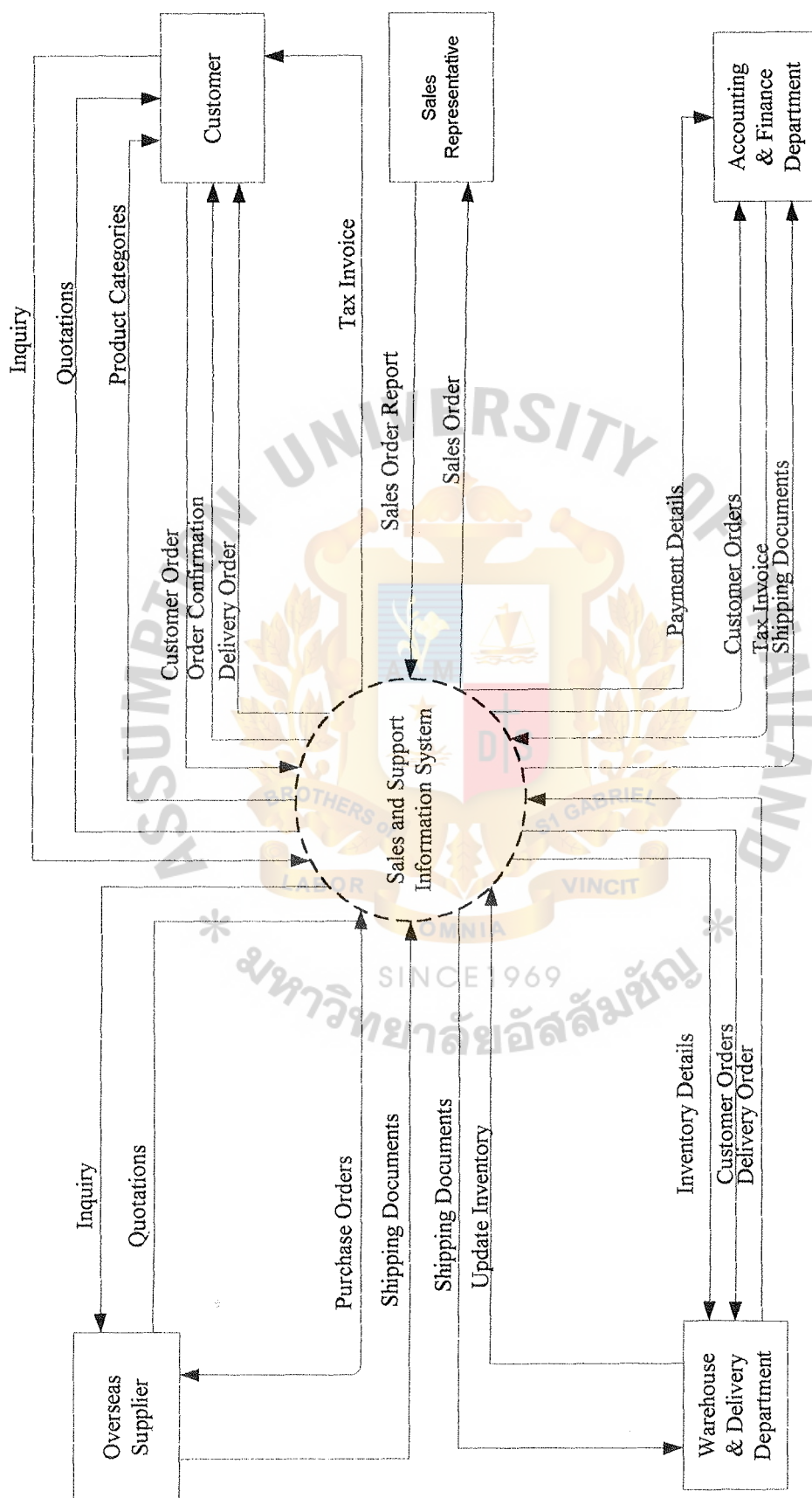
Figure A.2.   Context Diagram Proposed System.

44

APPENDIX   B
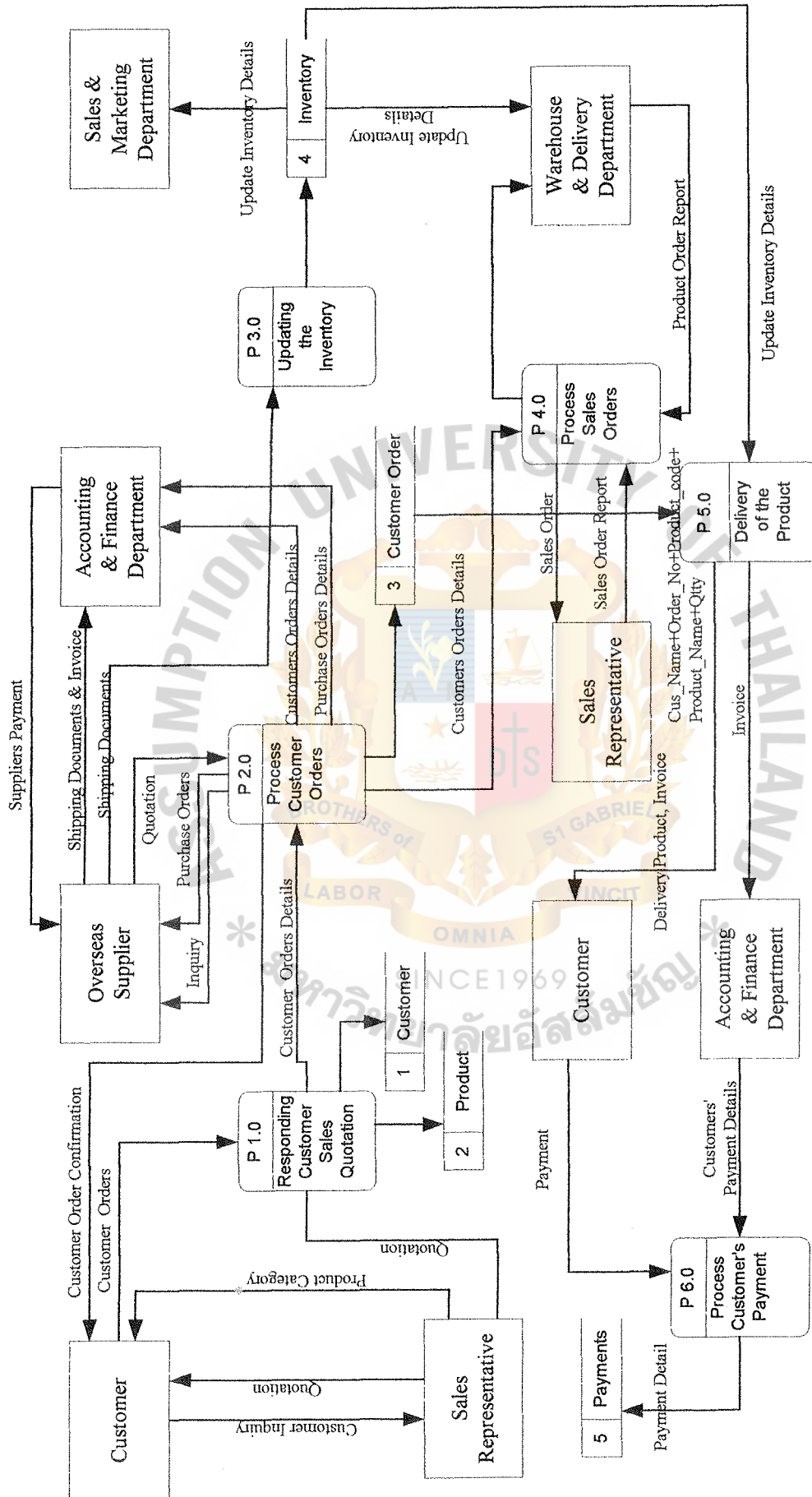
DATA FLOW DIAGRAM

Figure B.1.   Level 0   Data Flow Daigram.

46

Figure B.2. Level 1 Data Flow Diagram of Process 1.0.

47

Figure B.3. Level 1 Data Flow Diagram of Process 2.0.

48
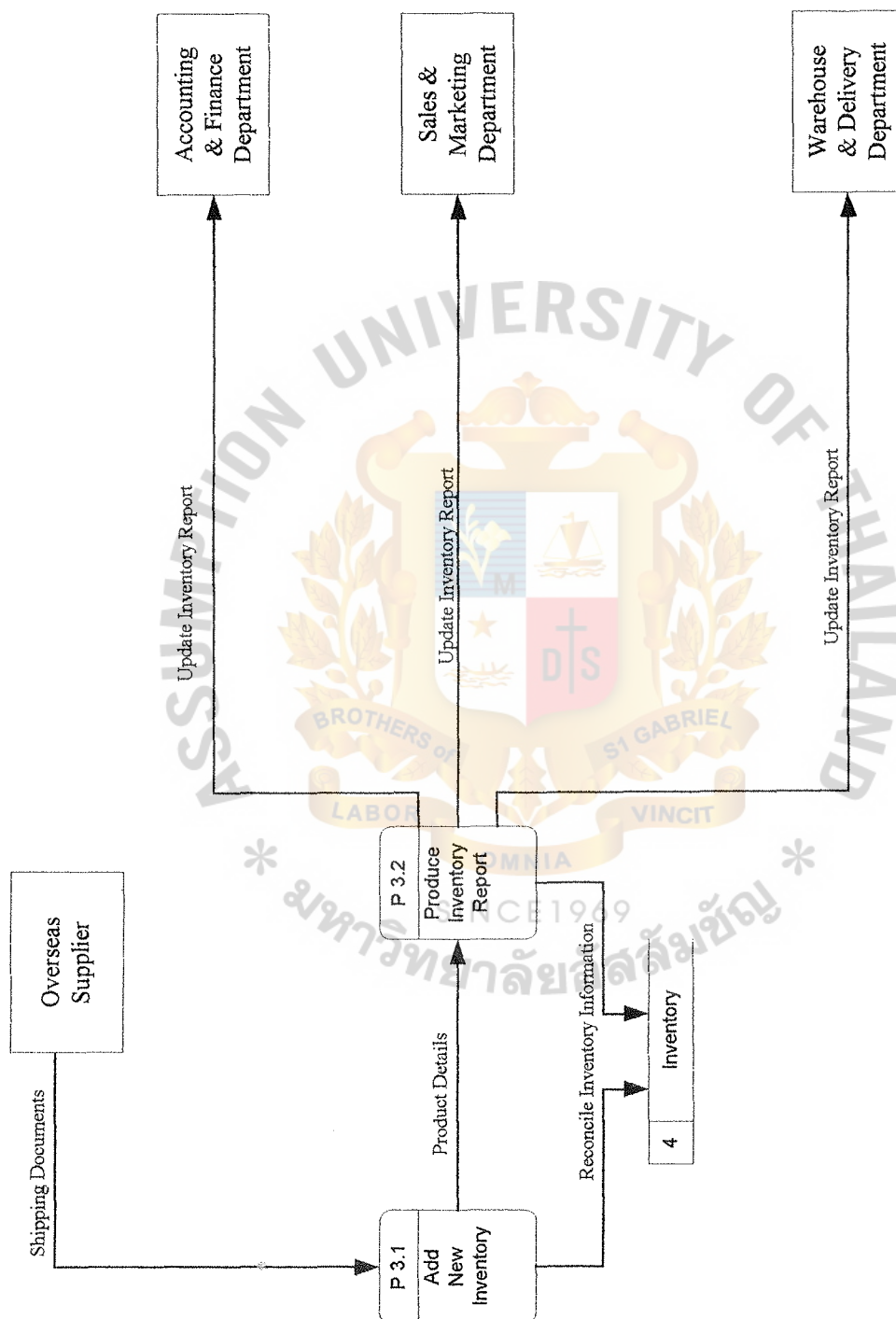
Figure B.4.   Level 1 Data Flow Diagram of Process 3.0.
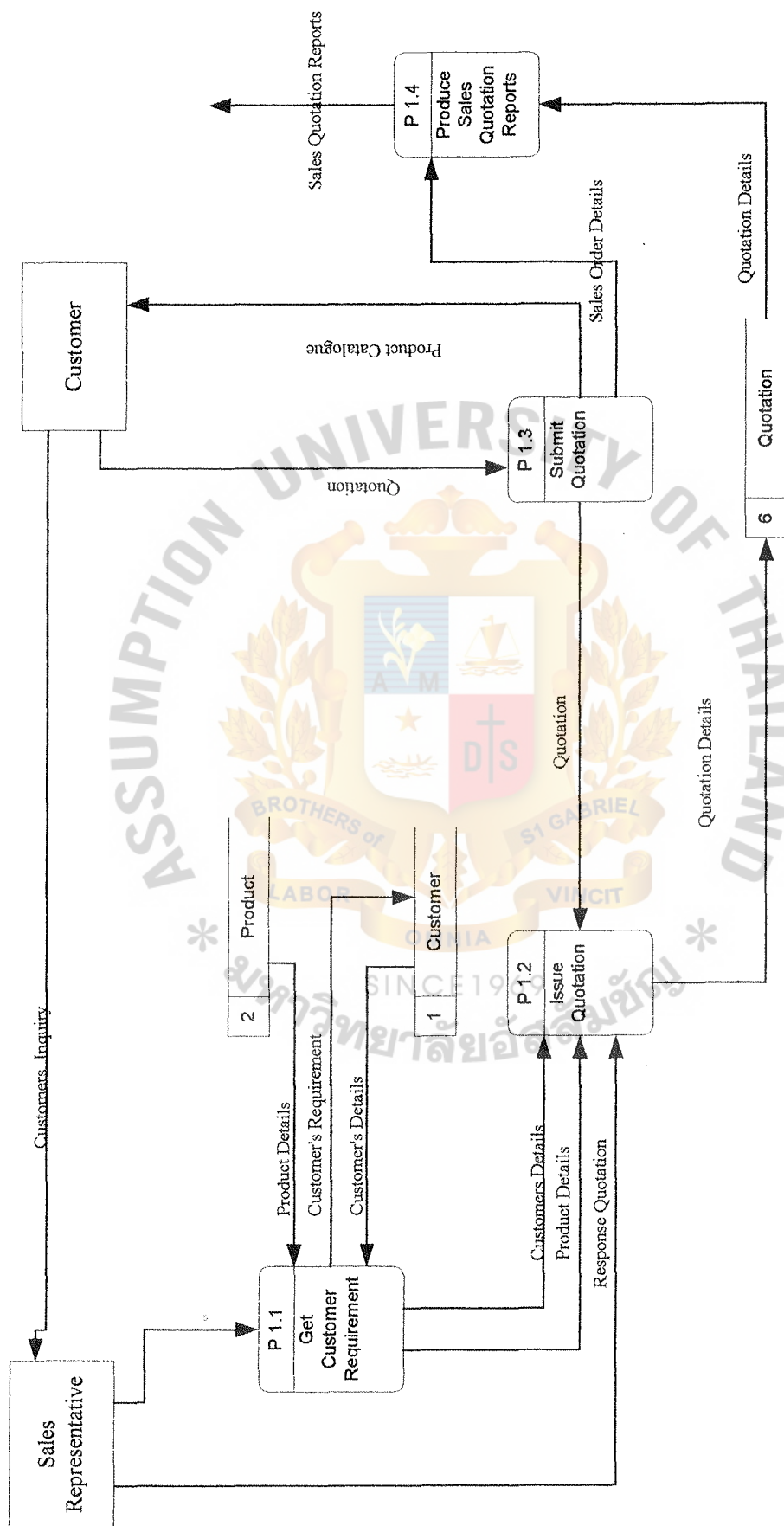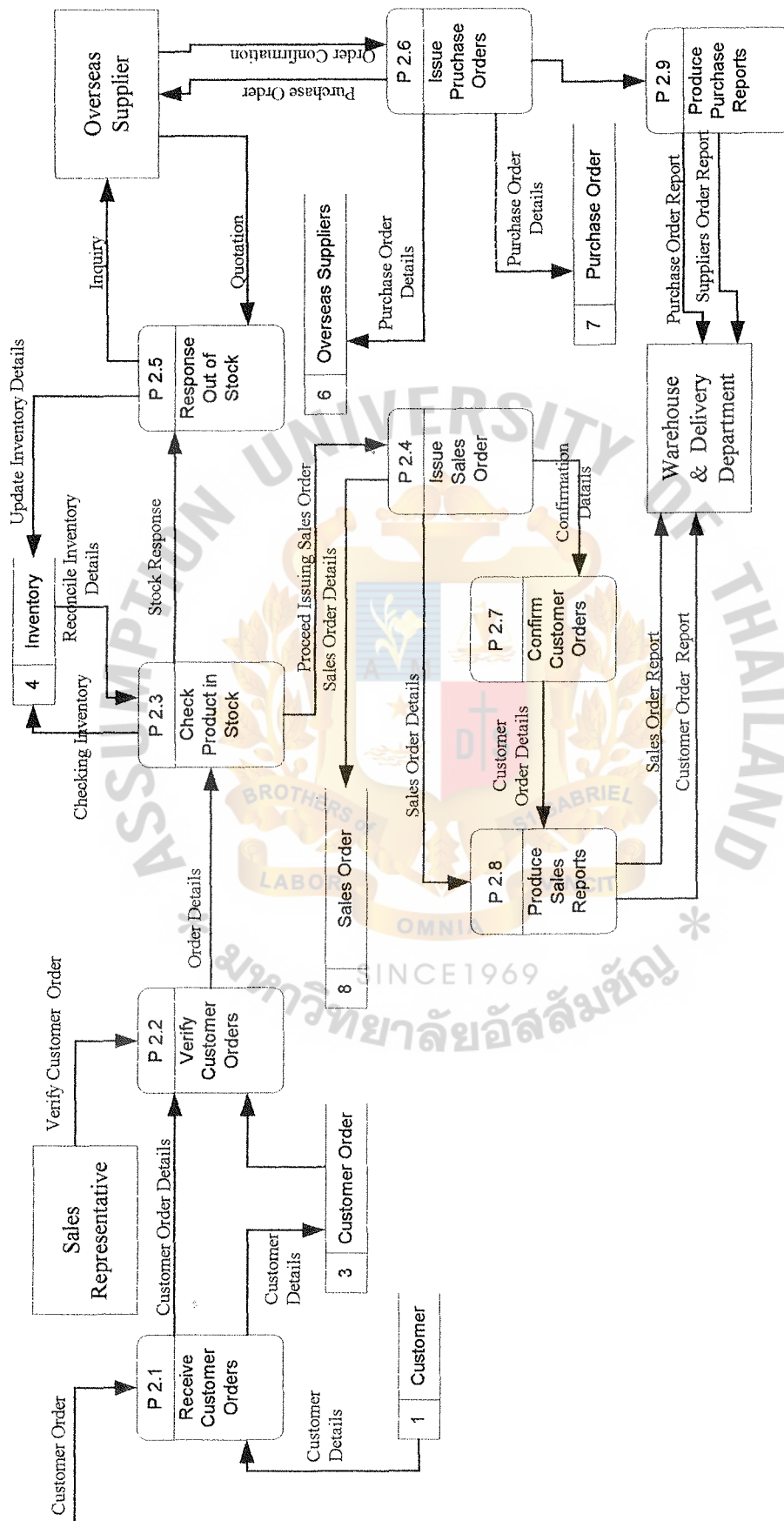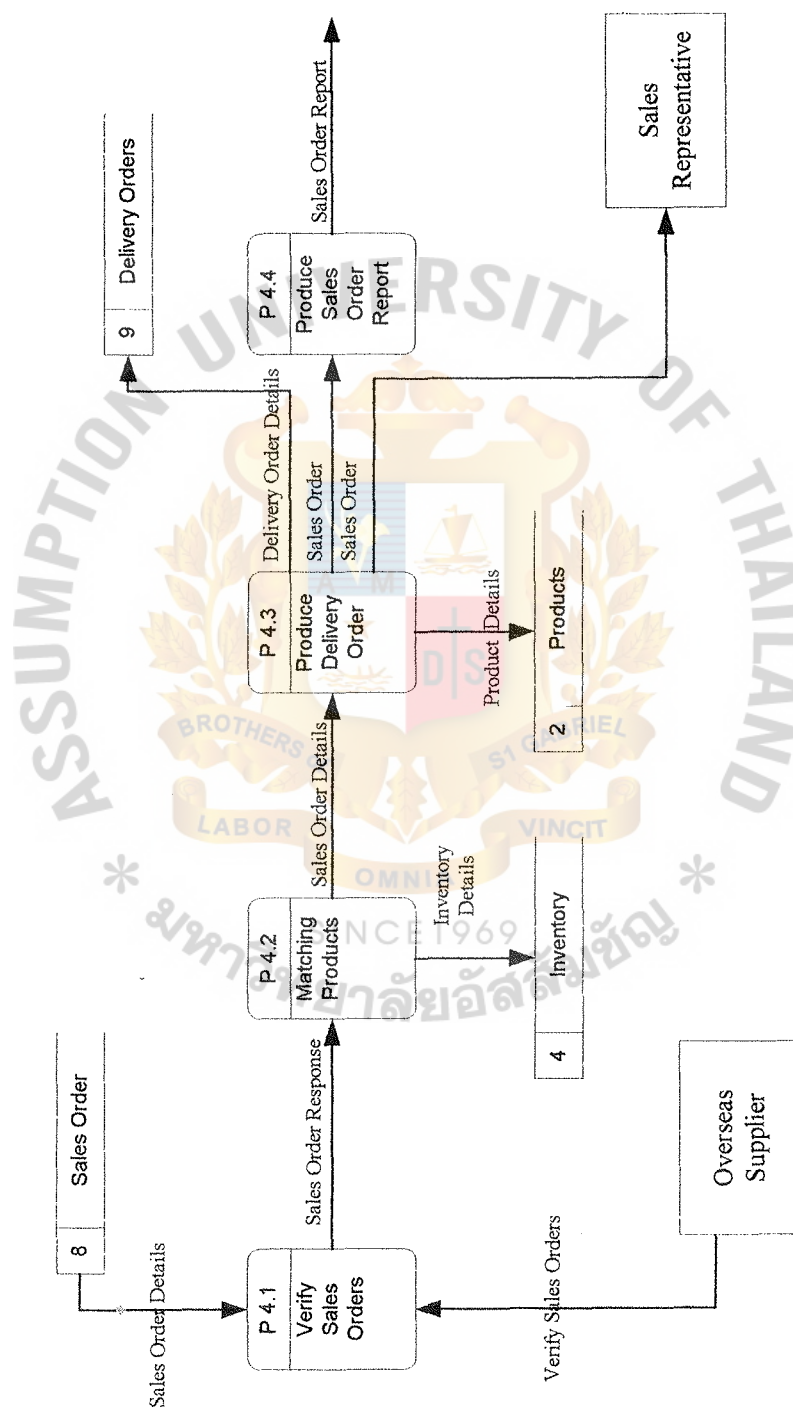
Figure B.5.   Level 1 Data Flow Diagram of Process 4.0.

50

Figure B.6. Level 1 Data Flow Diagram of Process 5.0.

51

Figure B.7.   Level 1 Data Flow Diagram of Process 6.0.

52

APPENDIX   C
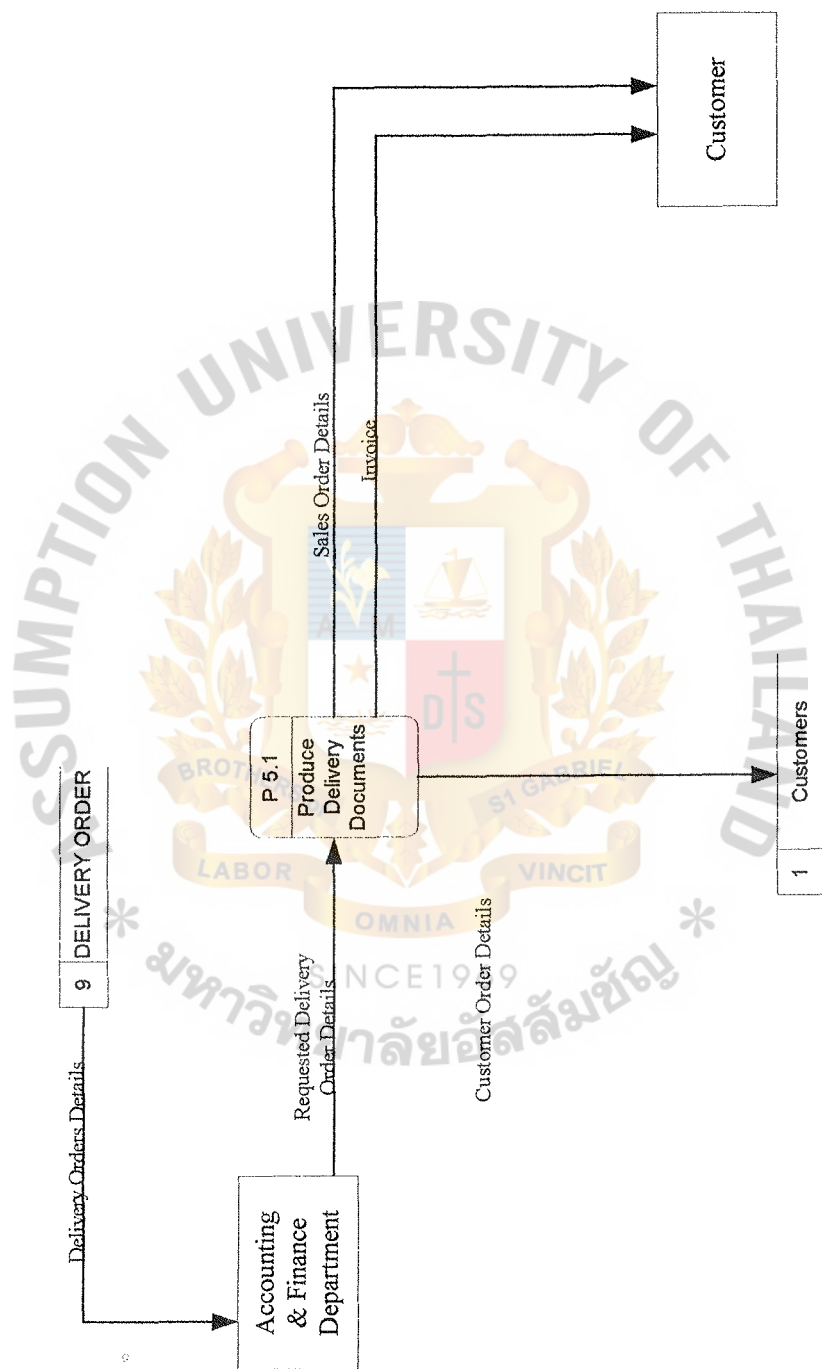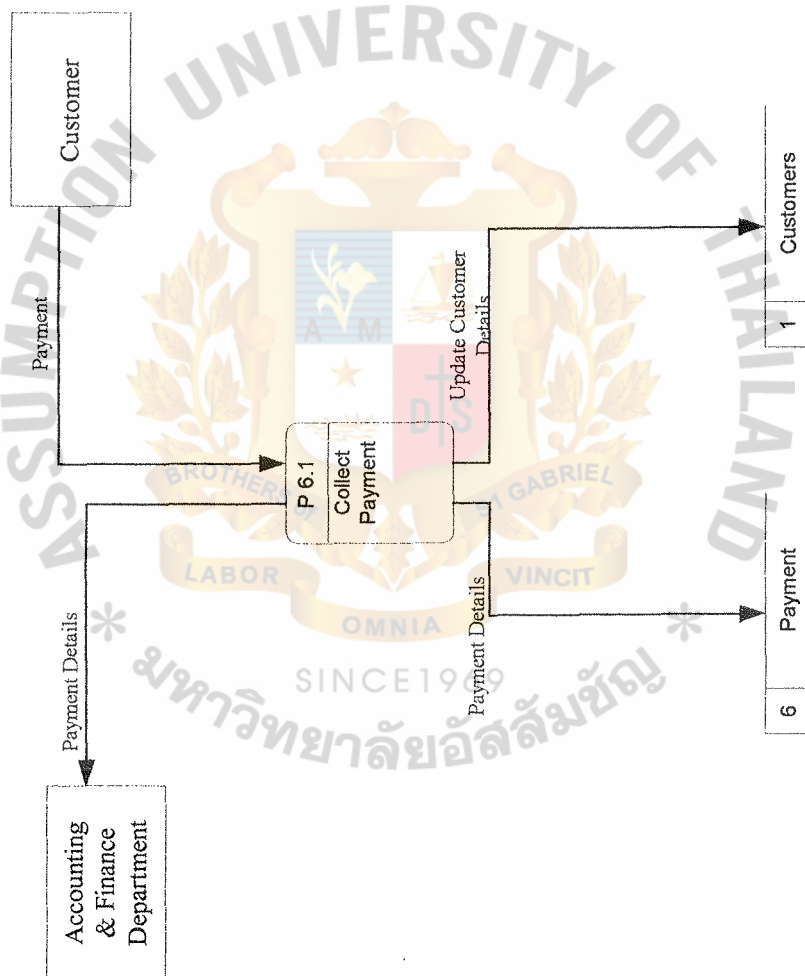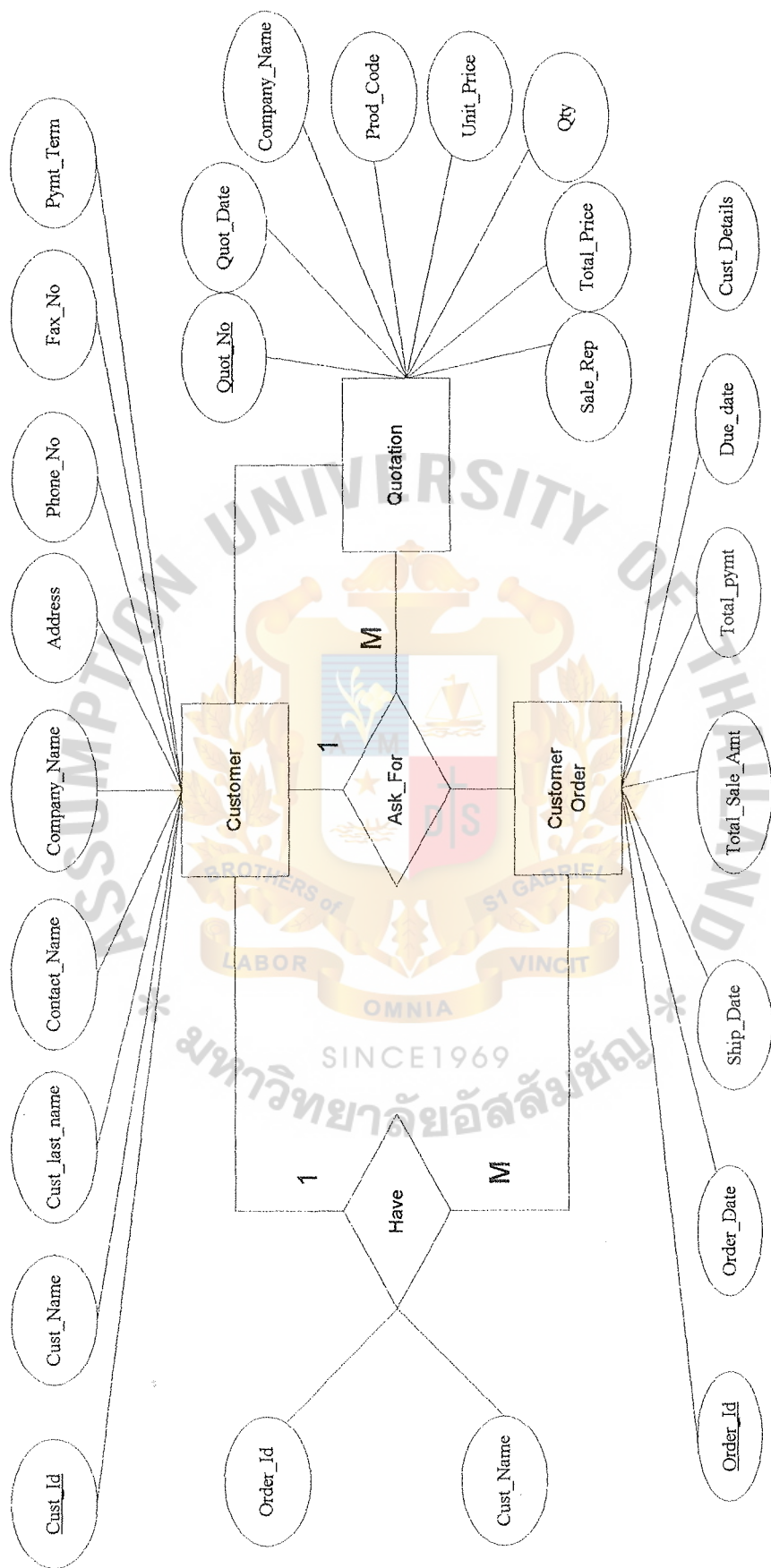
ENTITY-- RELATIONSHIP DIAGRAM

Figure C.1. Entity Relationship Diagram.
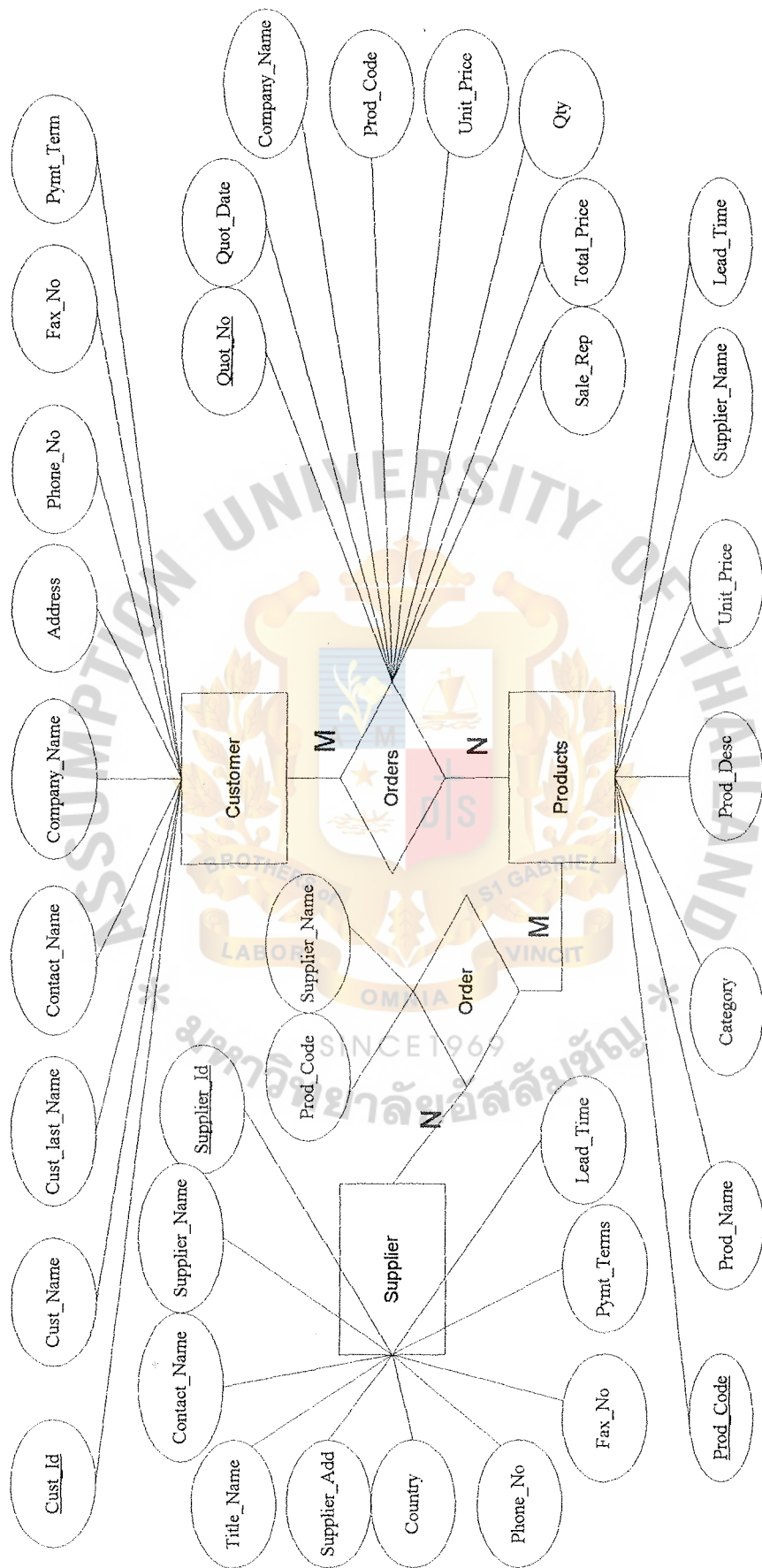
Figure C.2.   Entity Relationship Diagram.
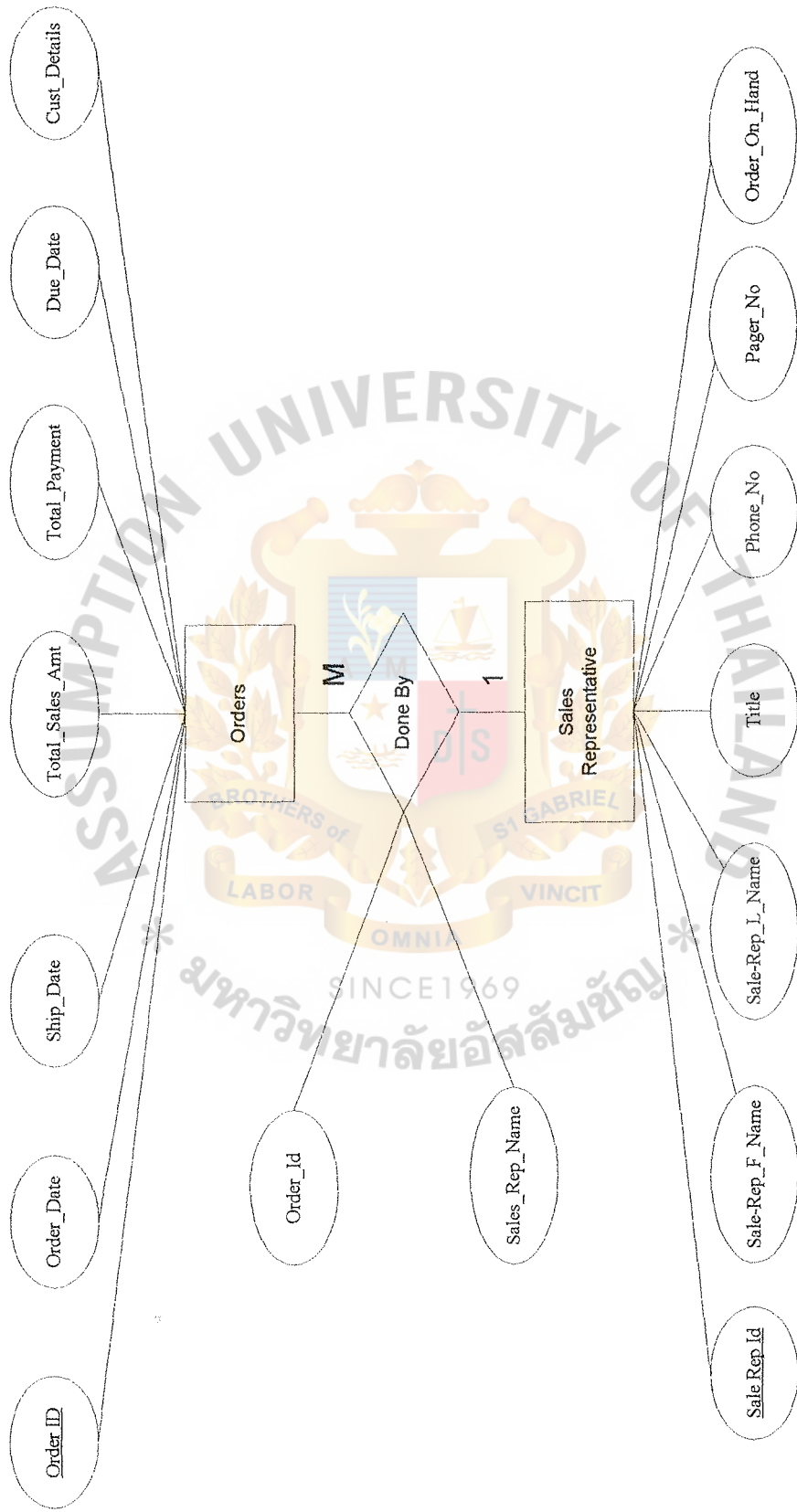
Figure C.3.   Entity Relationship Diagram.
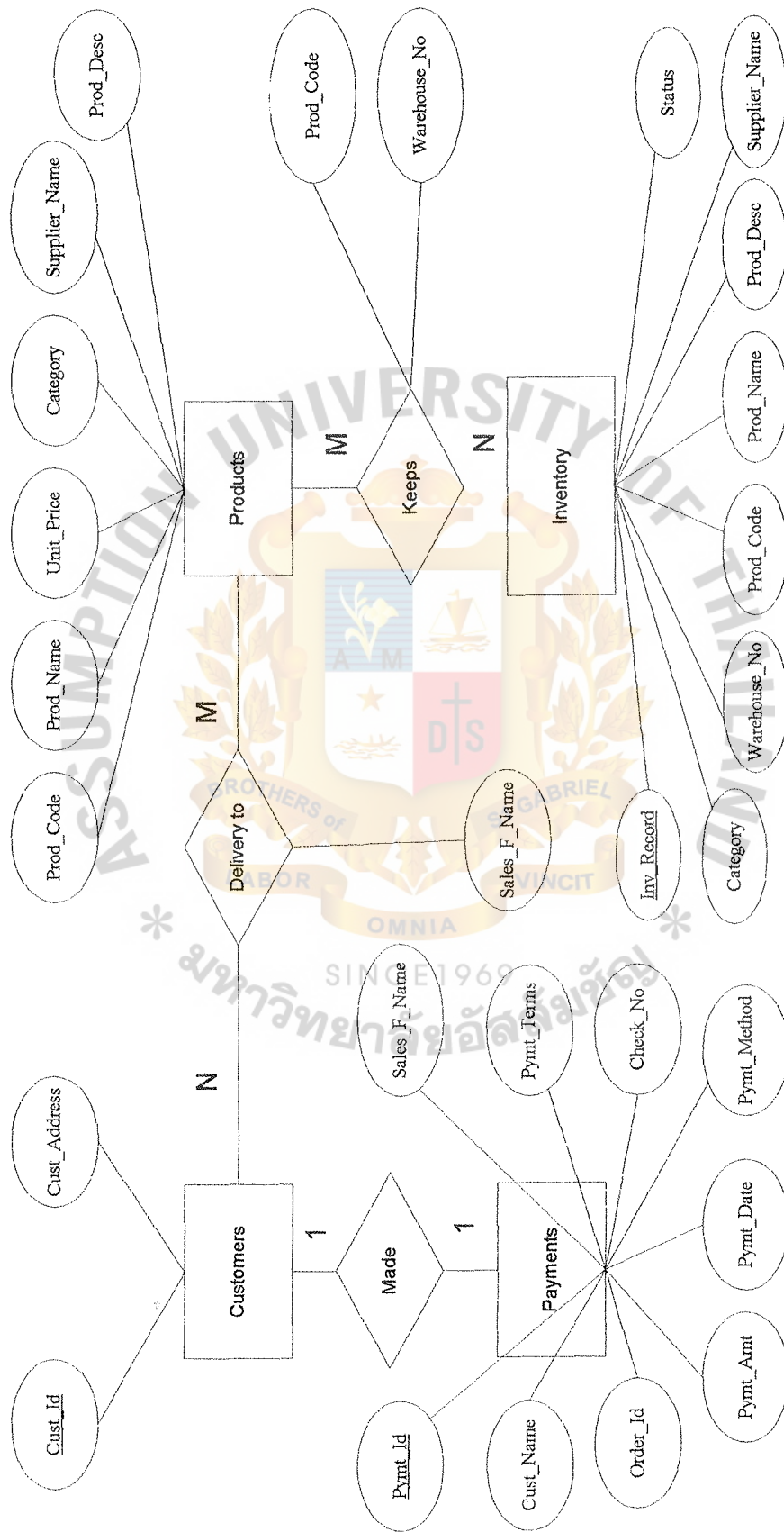
Figure C.4. Entity Relatioship Diagram.

57

APPENDIX   D

TABLE DESIGN

Table D.1. Table Design of Customers Details (Customers).

Cust_ID	Cust_Name	Cust_L_Name	Contact_Title	Company_Name	Address	Phone_No	Fax_No	Pymt_Term

Table D.2. Table Design of Products Details (Products).

Prod_Code	Prod_Name	Category	Prod_Desc	Unit_Price	Supplier_Name	Lead_Time

Table D.3. Table Design of Inventory Details (Inventory).

Inv_Record	Category	Warehouse_No	Prod_Code	Prod_Name	Prod_Desc	Supplier_Name	Status

Table D.4. Table Design of Payment Details (Payments).

Pymt_ID	Cust_Name	Order_ID	Pymt_Amt	Pymt_Date	Pymt_Method	Check_No	Pymt_Terms

59

Table D.5. Table Design of Quotation Details (Quotation).

Quot_No	Quot_Date	Company_Details	Prod_Code	Unit_Price	Qty	Total_Price	Sales_Rep_Name

Table D.6. Table Design of Customer Orders Details (Customer Orders).

Order_ID	Order_Date	Ship_Date	Total_Sales_Amt	Total_Pymt	Due_Date	Cust_Details

Table D.7. Table Design of Purchase Orders Details (Purchase Orders).

PO_No	PO_Date	Order_ID	Prd_Code	Sell_Prc	Ship_By	Ship_Sch	Super_Name	Qty	Unit_Prc	Dcnt_R	Sale_Rp_Nme

Table D.8. Table Design of Suppliers Information (Suppliers).

Sup_ID	Sup_Name	Contact_Name	Contact_Title	Sup_Add	Country	Phone_No.	Fax_No	Pymt_Terms	Lead_Time

60

APPENDIX E

INPUT SCREEN DESIGN

Figure E.1.　Login Menu Screen.

Figure E.2.　Main Menu Screen.

62

Figure E.3. SIS Main Menu Screen.

Figure E.4. Customers Information Input Screen.

63

Figure E.5.   Suppliers Information Input Screen.

Figure E.6.   Product Information Input Screen.

64

Figure E.7.   Sales Representative Information Input Screen.

Figure E.8.   Sales Quotation Input Screen.

Figure E.9.   Quotation Details Input Screen.

Figure E.10.   Customer Orders Input Screen.

Figure E.11.   Customer Orders Details Input Screen.

Figure E.12.   Purchase Order Input Screen.

Figure E.13.   Purchase Order Details Input Screen.

Figure E.14.   Delivery Order Input Screen.

68

Figure E.15. Inventory Details Input Screen.

Figure E.16. Payment Details Input Screen.

Figure E.17.   Report Menu Screen.

Figure E.18.   Entering Parameter Value – Print Report Screen.

Figure E.19.   Entering Parameter Value – Sales Quotation Form Input Screen.

Figure E.20.   Entering Parameter Value – Purchase Order Form Input Screen.

71

Figure E.21.   Entering Parameter Value – Delivery Order Input Screen.

APPENDIX   F

REPORT FORMS (OUTPUT DESIGN)

LYS INTERTRADE CO., LTD.
ALPHABETICAL LIST OF CUSTOMERS

No.	Customer Name	Address	Phone Number	Fax Number	Name	Last Name
1	ACT Consultants Co., Ltd.	10/F Manorom Bldg., 3354 Rama 4 Rd., Phrakanong, Bangkok 10110	(02) 249-8584	(02) 249-8610	Vanchai	Vimuktayon
2	Bitco International Trading Co., Ltd.	167/68-70 Soi Wat Dedoud, Jarunsanitwong, Bangkok 10600	(02) 411-0396	(02) 412-7883	Hafiz	Shahjahan
3	Far East Steel Co., Ltd.	17th Floor, One Pacific Place, 140 Sukhumvit Rd., Bangkok 10110	(02) 254-4705	(02) 254-709	Prawit	Lertwimonrat
4	Hanjin Shipping Co., Ltd.	3360 Soi Manorom Bldg., Rama 4 Rd., Klong Toey, Bangkok 10110	(02) 249-7676	(02) 249-9577	Pornlert	Jammavanichakul
5	Nichimen Co., (Thailand) Ltd.	3rd Floor, Thaniya Bldg., 62 Silom Rd., Bangrak, Bangkok 10500	(02) 236-0131	(02) 236-327	Chalermyos	WongMek
6	Orient Star Co., Ltd.	216/3, 7th Floor, I.P.N. Tower, Nanglinchee Rd., Bangkok 10120	(02) 285-4050	(02) 285-4280	Wuthichai	Piyasarasalathul
7	Saha Thai Steel Pipe Co., Ltd.	78 Moo 3, Poo Chao Rd., Prapradang, Samutprakarn 10130	(02) 385-9023	(02) 385-9288	Somchai	Lamatipanont
8	SCT Co., Ltd.	1 Siam Cement Rd., Bangsue, Bangkok 10800	(02) 586-412	(02) 587-2152	PongKeeree	Yossingha
9	Siam Metal Panich Co., Ltd.	57/64 Soi Watchamok, Rama 3 Rd., Bangkorlaem, Bangkok 10120	(02) 291-1022	(02) 291-3379	Pannee	Vorakitwattanakul
10	Toyota Tsusho (Thailand) Co., Ltd.	607 Asoke Dindaeng Rd., Bangkok 10400	(02) 247-6211	(02) 249-5130	Nopsuwat	Jirayupa

Figure F.1. Customers Lists by Alphabets.

74

LYS INTERTRADE CO., LTD.
ALPHABETICAL LIST OF SUPPLIERS

No.	Supplier Name	Address	Country	Phone Number	Fax Number	Contact Name
1	Pohang Iron & Steel Co., Ltd.	5 Dongdon-dong, Pohang City, Kyongsangbukdo	Korea	088-700-1146	088-700-1185	Kim Yong Jung
2	Nippon Steel Corporation	6-3, Otemachi 2-Chome, Chiyoda-Ku,	Japan	066-2-142-4111	066-2-142-4125	Yasuhishi Nagayama
3	Inchon Iron & Steel Co., Ltd.	1-Songhyun-dong, dong-ku, Inchon.	Korea	032-763-5000	032-763-5046	Kim Tek Jong
4	Chuo Build Industry Co., Ltd.	Kyodo Bldg., 10-12, 1-Chome, Nihonbashi, Horidome, Chuo-ku,	Japan	03-366-196-39	03-366-461-29	Tokuo Tomita
5	Future Enterprise Co., Ltd.	Room 815, Kwong Sang Hong Centre, 151-153 Hoi Bun Road, Kowloon,	Hong Kong	0852-2389-122	0852-2343-4906	Antonio Iam
6	Golden Electrical Tradin Co., Ltd.	G/F-4F China Pacific Industrial Bldg., 698Castle Peak Rd., Kawloon,	Hong Kong	0852-2744-121	0854-2735-1380	C. L. Hui
7	Jiann Cherng Chiou Co., Ltd.	28, Lane 538, Chiu Ju 1st Road, Kaohsiung	Taiwna	0886-7386-389	08886-7386-3894	Lien Chen Wen
8	International Trading Co. Ltd.	173, Jubilee Road, 2nd Floor, P. O. Box 577, Chittagong.	Bangladesh	0880-31-22180	0880-31-221808	Yousuf Mansur
9	Mitsui & Co., Ltd.	2-1, Ohtemachi 1-Chome, Chiyoda-ku, Tokyo	Japan	03-3285-2698	03-3285-9942	Norio Hironaka
10	Nissan Shatai Co., Ltd.	10-1, Amanuma, Hiratsuka City, Kanagawa	Japan	0463-21-8040	0463-21-8159	Yasuhisa Iizuka

Figure F.2. Suppliers Lists by Alphabets.

75

LYS INTERTRADE CO., LTD.

PRODUCTS AND PRICE LIST CLASSIFIED BY SUPPLIERS

No.	Product Code	Product Name	Product Description	Unit Price	Supplier Name	Lead Time
1	SSP-U-JS	Sheet Piling U-Type Sections	Spec. YSP U5, 9, 15, 23 and FSP I - V,	$350.00	Nippon Steel Corporation	30 - 45 days
2	SSP-Z-CN	Sheet Piling Z-Type Sections	Spec. FSP Z-25, 32, 38, 45	$450.00	Golden Electrical Trading Co., Ltd	45 - 50 days
3	SHP-CN	Sheet Piling H-Type Sections	Spec. Pile without Joints	$480.00	Future Enterprise Co., Ltd.	25 - 30 days
4	SPF-JP	Sheet Piling Flat-Type Sections	Spec. YSP F, FA, FX	$415.00	Nippon Steel Corporation	30 - 45 days
5	SPB-JP	Sheet Piling Box-Type Sections	Spec. FSP I-IV, I-IV A, V-L and VI-L	$435.00	Nippon Steel Corporation	30 - 45 days
6	WFS-IS-JP	Wide Flange shapes Inch Series	Spec. W8,10,12,14,16,18,21,24,27,30	$550.00	Nippon Steel Corporation	30 - 45 days
7	WFS-LB-JP	Light Beams and Joints	Spec. W8, 6, 5, 4	$435.00	Nippon Steel Corporation	30 - 45 days
8	SSC-CN	Channels	Spec. 300 X 90 X 9 X 13, 300 X 90 X 10	$360.00	Jiann Cherng Chiou Co., Ltd.	25 - 30 days
9	SSA-JP	Equal Angles	Spec. 150 X 150 X 10, 150 X 150 X 12	$390.00	Nippon Steel Corporation	30 - 45 days
10	SSI-JS	I-Beams	Spec. 100 X 75 X 5 X 8, 150 X 75 X 5.5	$450.00	Nippon Steel Corporation	30 - 45 days
11	WRD-HK	Wire Rods	Spec. SAE, Nominal 5.5 - 16.0 MM.	$330.00	Golden Electrical Trading Co., Ltd	45 - 50 days
12	BAR-JS	Bars	Spec. SAE or AISI, Nominal 22 - 40 MM	$360.00	Nippon Steel Corporation	30 - 45 days
13	ERW-P-JP	ERW Pipe	Spec. JIS, BIS, Nominal 16 - 20 MM.	$380.00	Nippon Steel Corporation	30 - 45 days
14	ESS-KR	Electrical Sheet	Spec. JIS G-9, G-10, G-11 and BS-M	$750.00	Pohang Iron & Steel Co., Ltd.	45 - 50 days
15	CRC-KR	Cold Rolled Coils	Spec. JIS G3302, ASTM A526, A527	$740.00	Pohang Iron & Steel Co., Ltd.	45 - 50 days
16	SCP-KR	Checkered Plate	Spec. JIS G3101	$450.00	Inchon Iron & Steel Co., Ltd.	45 - 50 days
17	ERW-G-JP	ERW Galvanized Steel Pipes	Spec.JIS G3444 STK41	$480.00	Mitsui & Co., Ltd.	30 - 45 days
18	ERW-B-JP	ERW Black Steel Pipes	Spec. ASTM A120/A53 Grade A, No. 40	$360.00	Chuo Build Industry Co., Ltd.	30 - 40 days
19	ERW-SQ-HK	ERW Black Square Pipes	Spec. JIS G3444 STK41,	$380.00	Future Enterprise Co., Ltd.	25 - 30 days
20	SCO-JP	Steel Conduit	Spec. ANSI C80.1 Nominal 0.5' - 1.0 MM.	$480.00	Nissan Shatai Co., Ltd.	30 - 40 days

Figure F.3.   Products and Price List Classified by Suppliers Report.

LYS INTERTRADE CO., LTD.

PRODUCTS AND PRICE LIST CLASSIFIED BY PRODUCT CATEGORIES

No.	Category	Product Code	Product Description	Unit Price	Supplier Name	Lead Time
1	Bars and Wire Rods	WRD-HK	Spec. SAE, Nominal 5.5 - 16.0 MM.	$350.00	Golden Electrical Trading Co., Ltd.	45 - 50 days
2	Bars and Wire Rods	BAR-JS	Spec. SAE or AISI, Nominal 22 - 40 MM.	$360.00	Nippon Steel Corporation	30 - 45 days
3	Cold Rolled Coils and Sheets	CRC-KR	Spec. JIS G3302, ASTM A526, A527	$740.00	Pohang Iron & Steel Co., Ltd.	45 - 50 days
4	Electrical Sheet and Strips	ESS-KR	Spec. JIS G-9, G-10, G-11 and BS-M	$750.00	Pohang Iron & Steel Co., Ltd.	45 - 50 days
5	Pipe and Tubes	ERW-B-JP	Spec. ASTM A120/A53 Grade A, No. 40	$360.00	Chuo Build Industry Co., Ltd.	30 - 40 days
6	Pipe and Tubes	ERW-G-JP	Spec. JIS G3444 STK41	$480.00	Mitsui & Co., Ltd.	30 - 45 days
7	Pipe and Tubes	ERW-P-JP	Spec. JIS, BIS, Nominal 16 - 20 MM.	$380.00	Nippon Steel Corporation	30 - 40 days
8	Pipe and Tubes	SCO-JP	Spec. ANSI C80.1 Nominal 0.5' - 1.0 MM.	$480.00	Nissan Shatai Co., Ltd.	45 - 50 days
9	Sheet Piling	SSP-Z-CN	Spec. FSP Z-25, 32, 38, 45	$450.00	Golden Electrical Trading Co., Ltd.	30 - 45 days
10	Sheet Piling	SPH-CN	Spec. Piple without joints	$480.00	Future Enterprise Co., Ltd.	25 - 30 days
11	Sheet Piling	SSP-U-JS	Spec. YSP U5,9,15,23 and FSP I-v	$415.00	Nippon Steel Corporation	30 - 45 days
12	Sheet Piling	SPF-JP	Spec. YSP F, FA, FX	$435.00	Nippon Steel Corporation	30 - 45 days
13	Sheet Piling	SPB-JP	Spec. FSP I-IV, I-IV A, V-L and VI-L	$450.00	Inchon Iron & Steel Co., Ltd.	30 - 45 days
14	Steel Plate	SCP-KR	Spec. JIS G3101	$360.00	Jiann Cherng Chiou Co., Ltd.	45 - 50 days
15	Steel Shapes	SSC-CN	Spec. 300 X 90 X 9 X 13, 300 X 90 X 10	$360.00	Nippon Steel Corporation	25 - 30 days
16	Steel Shapes	SSI-JS	Spec. 100 X 75 X 5 X 8, 150 X 75 X 5.5	$450.00	Nippon Steel Corporation	30 - 45 days
17	Steel Shapes	SSA-JP	Spec. 150 X 150 X 10, 150 X 150 X 12	$390.00	Nippon Steel Corporation	30 - 45 days
18	Structural Pipes	ERW-SQ-HK	Spec.JIS G3444 STK41	$380.00	Future Enterprise Co., Ltd.	25 - 30 days
19	Wide Flange Shapes	WFS-IS-JP	Spec. W8,10,12,14,16,18,21,24,27,30	$550.00	Nippon Steel Corporation	30 - 45 days
20	Wide Flange Shapes	WFS-LB-JP	Spec. W8, 6, 5, 4	$435.00	Nippon Steel Corporation	30 - 45 days

Figure F.4.   Products and Price List Classified by Product Categories Report.

77

LYS INTERTRADE CO., LTD.
SALES QUOTATION REPORT

For the Month of : September 1999

CURRENCY : USD$

Quotation No.	Date	Customer name	Total Amount	Sales Representative	Remarks
990820	10/9/99	ACT Consultants Co., Ltd.	9,700.00	Prapas L.	
990823	17/9/99	Far East Steel Co., Ltd.	8,500.00	Phongphan M.	
990825	19/9/99	Nichimen Co., (Thailand) Ltd.	4,500.00	Weerachai S.	
990828	24/9/99	SCT Co., Ltd.	6,423.00	Pimkamon S.	
990829	28/9/99	Saha Thai Steel Pipe Co., Ltd.	5,200.00	Montri T.	
990831	30/9/99	Toyota Tsusho (Thailand) Co., Ltd.	6,500.00	Prapas L.	
		Total Quotation Amount	**40,823.00**		

Figure F.5.   Sales Quotation Report.

LYS INTERTRADE CO., LTD.
CUSTOMER ORDERS REPORT

For the Month of : September 1999   CURRENCY : USD$

Order ID	Customer Order No.	Order Date	Customer name	Customers' Requested Date	Sales Representative	Order Amount
990911	BIT/11-99	11/9/99	Bitco International Trading Co., Ltd.	10/10/99	Prapas L.	9,000.00
990917	HSC/17-99	17/9/99	Hanjin Shipping Co., Ltd.	20/10/99	Pimkamon S.	5,500.00
990929	OSC/29-99	29/9/99	Orient Star Co., Ltd.	30/10/99	Montri T.	6,450.00
					Total Order Amount	20,950.00

Figure F.6.   Customer Orders Report.

79

LYS INTERTRADE CO., LTD.
PRODUCT PURCHASED REPORT

For the Month of: September 1999   CURRENCY : USD$

P/O ID	P/O No.	P/O Date	Supplier Name	Requested Delivery	Sales Representative	P/O Amount (US$)
10999	NSC/19-99	1/9/99	Nippon Steel Corporation	05/10/99	Weerachai S.	5,900.00
80999	MOL/08-99	8/9/99	Mitsui & Co., Ltd.	10/10/99	Montri T.	4,200.00
20999	CBI/20-99	20/9/99	Chuo Build Industry Co., Ltd.	25/10/99	Parpas L.	5,550.00
					Total P/O Amount US$	15,650.00

Figure F.7.   Product Purchased Report.

80

LYS INTERTRADE CO., LTD.

INVENTORY REPORT

No.	Product Code	Product Name	Product Description	Supplier Name	Location	Remarks
1	BAR-JS	Bars	Spec. SAE or AISI, Nominal 22 - 40 MM.	Nippon Steel Corporation	1	
2	CRC-KR	Cold Rolled Coils	Spec. JIS G3302, ASTM A526, A527	Pohang Iron & Steel Co., Ltd.	2	
3	ERW-B-JP	ERW Black Steel Pipes	Spec. ASTM A120/A53 Grade A, No. 40	Chuo Build Indusry Co., Ltd.	1	
4	ERW-G-JP	ERW Galvanized Steel Pipes	Spec. JIS G3444 STK41	Mitsui & Co., Ltd.	1	
5	ERW-P-JP	ERW Pipe	Spec. JIS, BIS, Nominal 16 - 20 MM.	Nippon Steel Corporation	1	
6	ERW-SQ-HK	ERW Black Square Pipes	Spec. JIS G3444 STK41,	Future Enterprise Co., Ltd.	2	
7	ESS-KR	Electrical Sheet	Spec. JIS G-9, G-10, G-11 and BS-M	Pohang Iron & Steel Co., Ltd.	1	
8	SCO-JP	Steel Conduit	Spec. ANSI C80.1 Nominal 0.5' - 1.0 MM.	Nissan Shatai Co., Ltd.	2	
9	SCP-KR	Checkered Plate	Spec. JIS G3101	Inchon Iron & Steel Co., Ltd.	1	
10	SHP-CN	Sheet Piling H-Type Sections	Spec. Pile without Joints	Future Enterprise Co., Ltd.	2	
11	SPB-JP	Sheet Piling Box-Type Sections	Spec. FSP I-IV, I-IV A, V-L and VI-L	Nippon Steel Corporation	1	
12	SPF-JP	Sheet Piling Flat-Type Sections	Spec. YSP F, FA, FX	Nippon Steel Corporation	2	
13	SSA-JP	Equal Angles	Spec. 150 X 150 X 10, 150 X 150 X 12	Nippon Steel Corporation	1	
14	SSC-CN	Channels	Spec. 300 X 90 X 9 X 13, 300 X 90 X 10	Jiann Cherng Chiou Co., Ltd.	1	
15	SSI-JS	I-Beams	Spec. 100 X 75 X 5 X 8, 150 X 75 X 5.5	Nippon Steel Corporation	2	
16	SSP-U-JS	Sheet Piling U-Type Sections	Spec. YSP U5, 9, 15, 23 and FSP I - V,	Nippon Steel Corporation	2	
17	SSP-Z-CN	Sheet Piling Z-Type Sections	Spec. FSP Z-25, 32, 38, 45	Golden Electrical Trading Co., Ltc	1	
18	WFS-IS-JP	Wide Flange shapes Inch Series	Spec. W8,10,12,14,16,18,21,24,27,30	Nippon Steel Corporation	2	
19	WFS-LB-JP	Light Beams and Joints	Spec. W8, 6, 5, 4	Nippon Steel Corporation	1	
20	WRD-HK	Wire Rods	Spec. SAE, Nominal 5.5 - 16.0 MM.	Golden Electrical Trading Co., Ltc	1	

Figure F.8.   Inventory Report.

81

LYS INTERTRADE CO., LTD.
SALES AMOUNT BY SUPPLIERS REPORT
For the Period of July - September 1999

Supplier : Nippon Steel Corporation

No.	Product Code	Product Name	Product Description	Unit Sold	Unit Price (US$)	Sales Amount
1	BAR-JS	Bars	Spec. SAE or AISI, Nominal 22 - 40 MM.	15	360	5,400.00
2	ERW-B-JP	ERW Black Steel Pipes	Spec. ASTM A120/A53 Grade A, No. 40	20	360	7,200.00
3	ERW-P-JP	ERW Pipe	Spec. JIS, BIS, Nominal 16 - 20 MM.	25	380	9,500.00
4	ESS-KR	Electrical Sheet	Spec. JIS G-9, G-10, G-11 and BS-M	25	750	18,750.00
5	SCP-KR	Checkered Plate	Spec. JIS G3101	17	450	7,650.00
6	SPB-JP	Sheet Piling Box-Type Sections	Spec. FSP I-IV, I-IV A, V-L and VI-L	20	415	8,300.00
7	SSA-JP	Equal Angles	Spec. 150 X 150 X 10, 150 X 150 X 12	30	390	11,700.00
8	SSI-JS	I-Beams	Spec. 100 X 75 X 5 X 8, 150 X 75 X 5.5	20	450	9,000.00
			Sub - Total			77,500.00

Figure F9.   Sales Amount by Suppliers Report.

82

LYS INTERTRADE CO., LTD.
SALES AMOUNT BY CUSTOMER REPORT
As of November, 1999

Customer : Far East Steel Co., Ltd. (Thailand)

S/N	Order ID	P/O No.	Order Date	Supplier Name	Amount (US$)	Sales Representative
1	990209	NSC/0299-09	8/9/99	Nippon Steel Corporation	7,500.00	Parpas L.
2	991009	PSC/1099-09	10/9/99	Pohang Iron & Steel Co., Ltd.	5,400.00	Pimkamon S.
3	991709	FEC/1799-09	17/9/99	Future Enterprise Co., Ltd.	4,350.00	Phongphan M.
4	992009	GET/2099-09	22/9/99	Golden Electrical Trading Co., Ltd.	6,540.00	Weerachai S.
5	992609	ITC/2699-09	25/9/99	International Trading Co., Ltd.	5,000.00	Montri T.
				Total Amount	**28,790.00**	

Figure F.10.   Sales Amount by Customer Report.

83

LYS INTERTRADE CO., LTD.
SALES AMOUNT BY CURRENCY REPORT
For the Period of January – June 1999

Currency : US$

No.	Order Date	Delivery Date	Supplier Name	Customer Name	Amount (US$)	Remarks
1	05-Jan-99	07-Mar-99	Pohang Iron & Steel Co., Ltd.	Bitco International Trading Co., Ltd.	3,850.00	
2	12-Jan-99	15-Mar-99	Nippon Steel Corporation	Far East Steel Co., Ltd.	4,980.00	
3	03-Feb-99	05-Apr-99	Inchon Iron & Steel Co., Ltd.	SCT Co., Ltd.	7,850.00	
4	15-Feb-99	20-Apr-99	Chuo Build Industry Co., Ltd.	Saha Thai Steel Pipe Co., Ltd.	3,864.00	
5	16-Mar-99	20-May-99	Future Enterprise Co., Ltd.	Siam Metal Panich Co., Ltd.	9,855.00	
6	22-Apr-99	20-Jun-99	Golden Electrical Trading Co., Ltd.	Toyota Tsusho (Thailand) Co., Ltd.	3,486.00	
7	29-Apr-99	30-Jun-99	Nissan Shatai Co., Ltd.	ACT Consultants Co., Ltd.	7,520.00	
8	3/5/99	30/6/99	Mitsui & Co., Ltd.	Nichimen Co., (Thailand) Ltd.	8,510.00	
				Sub – Total	49,915.00	

Figure F.11.   Sales Amount by Currency Report.

LYS INTERTRADE CO., LTD.

SALES AMOUNT BY SALES REPRESENTATIVE SALES REPORT

As of .... August 1999

Sales Representative : Prapas Likitwatcharapakorn

No.	Order ID	Supplier Name	Customer Name	Currency	Amount (US$)
1	990425	Pohang Iron & Steel Co., Ltd.	ACT Consultants Co., Ltd.	US$	3,850.00
2	990430	Nissan Shatai Co., Ltd.	Bitco International Trading Co., Ltd.	US$	4,980.00
3	990525	Nippon Steel Corporation	Far East Steel Co., Ltd.	US$	7,850.00
4	990530	Mitsui & Co., Ltd.	Nichimen Co., (Thailand) Ltd.	US$	3,864.00
5	990621	Inchon Iron & Steel Co., Ltd.	Saha Thai Steel Pipe Co., Ltd.	US$	9,855.00
			Total Amount Sales	US$	30,399.00
6	990625	Golden Electrical Trading Co., Ltd.	SCT Co., Ltd.	THB	3,486.00
7	990702	Future Enterprise Co., Ltd.	Siam Metal Panich Co., Ltd.	THB	7,520.00
8	990803	Chuo Build Industry Co., Ltd.	Toyota Tsusho (Thailand) Co., Ltd.	THB	8,510.00
			Total Amount Sales		80,314.00

Figure F.12.   Sales Amount by Sales Representative Sales Report.

LYS INTERTRADE CO., LTD.

TOTAL MONTHLY SALES MARGIN SUMMARY REPORT

For the month of August 1999

No.	Sold To	Cost (US$)	Selling Price (US$)	Amount (US$)
1	Siam Metal Panich Co., LTd.	7,500.00	8,450.00	950.00
2	Saha Steel Pipe Co., Ltd.	3,850.00	4,500.00	650.00
3	SCT Co., Ltd.	4,900.00	5,235.00	335.00
4	Far East Steel Co., Ltd.	5,580.00	6,210.00	630.00
5	Bitco International Trading Co., Ltd.	6,950.00	7,150.00	200.00
			Total Sales Margin	2,765.00

Figure F.13.   Total Monthly Sales Margin Report.

LYS INTERTRADE CO., LTD.

TOP TEN SALES VOLUME OF CUSTOMER
FOR THE MONTH OF AUGUST, 1999

No.	Customer	Order Amount (US$)
1	Siam Metal Panich Co., LTd.	9,850.00
2	SCT Co., Ltd.	7,415.00
3	Saha Steel Pipe Co., Ltd.	3,850.00
4	Far East Steel Co., Ltd.	3,520.00
5	Bitco International Trading Co., Ltd.	3,210.00

Figure F.14. Top Ten Sales Volume of Customers.

LYS INTERTRADE CO., LTD.
CUSTOMER PAYMENTS SUMMARY REPORT
For The Month of August 1999

Date	Order ID	Customer Name	Payment Amount (THB)	Check No.	Bank
3-Aug-99	990405	Toyota Tsusho (Thailand) Co., Ltd.	2,500,000.00	3957612	Thai Farmers Bank, Silom Branch
5-Aug-99	990413	Siam Metal Panich Co., Ltd.	8,500,000.00	9832746	Bangkok Bank, Yannawa Branch
7-Aug-99	990421	Saha Thai Steel Pipe Co., Ltd.	3,480,000.00	1568463	Ayudha Bank, Head Office
15-Aug-99	990430	Bitco International Trading Co., Ltd.	4,500,500.00	9468566	Siam Commercial Ban, Silom Branch
19-Aug-99	990436	Far East Steel Co., Ltd.	950,000.00	4759863	Bangkok Bank, Head Office
25-Aug-99	990481	SCT Co., Ltd.	1,285,610.00	9128977	Thai Farmers Bank, Head Office
27-Aug-99	990523	ACT Consultants Co., Ltd.	3,928,176.00	6328974	Ayudha Bank, Sathorn Road,
30-Aug-99	990528	Nichimen Co., (Thailand) Ltd.	1,541,630.00	7963258	Sakura Bank, Silom Branch
		Total Payment Amount	**26,685,916.00**		

Figure F.15.   Customer Payment Summary Report.

LYS INTERTRADE CO., LTD.

406 Moo 7, Suksawad 78, Suksawad Road, Bangjark, Prapradang, Samutprakarn 10130

Telephone : (02) 612-4576-80 Facsmile : (02) 612-7890

QUOTATION

MESSR: NICHIMEN CO., (THAILAND) LTD.

3rd FLOOR, THANIYA BLDG., 62 SILOM ROAD,
BANGRAK, BANGKOK 10500

ATTN: MR. CHALERMYOS WONGMEK

INCOTERMS	PAYMENT TERMS		PORT OF DESTINATION
N/45	45 DAYS AFTER DELIVERY DATE		REQUESTED LOCATION
REFERENCE	DELIVERY PERIOD		INSURANCE
LYS038/99	2 WEEKS UPON RECEIPT OF P/O		NOT INCLUDED
VALIDITY	PARTIAL DELIVERY	OPTION	PACKING METHOD
AUGUST 31, 1999	ALLOWED	-	STANDARD PACKING

ITEM	DESCRIPTION		QUANTITY (MT.)	UNIT PRICE / MT.	AMOUNT
1	CHANNELS	SCO-JP	20	$360.00	$7,200.00
2	I-BEAMS	SSI-JS	30	$450.00	$13,500.00
3	CHECKERED PLATE	SCP-KR	15	$450.00	$6,750.00
4	ELECTRICAL SHEET	ESS-KR	15	$750.00	$11,250.00
	TOTAL		80		$38,700.00

This quotaion is subjected to the terms and conditions on the face and reverse side hereof in its entirely, and attachments.

LYS INTERTRADE CO., LTD.

LI WEI JUN

MANAGER

Figure F.16.   Sales Quotation Form.

LYS INTERTRADE CO., LTD.

406 Moo 7, Suksawad 78, Suksawad Road, Bangjark, Prapradang, Samutprakarn 10130
Telephone : (02) 612-4576-80 Facsmile : (02) 612-7890

PURCHASE ORDER

PAGE 1 OF 1
PURCHASE ORDER NO.
LYS-P-0821-01
This number must appear on all packages, packing list, invoices and correspondence
DATE AUGUST 21, 1999

MESSR: HONDA TRADING AMERICA CORPORATION

24500 HONDA PARKWAY,
MARYSVILLE, OHIO 43040-9140
USA

ATTN : MR. NISHIZAWA / MARKETING MANAGER

INCOTERMS	PAYMENT TERMS	PORT OF DESTINATION
C&F BANGKOK, THAILAND	REMITTANCE 45 DAYS AFTER B/L DATE	BANGKOK, THAILAND
OUR REFERENCE	PARTIAL SHIPMENT	INSURANCE
10343 / 10344	ALLOWED	NOT INCLUDED
REQUESTED DATE	DELIVERY METHOD	PACKING METHOD
RTA 1st WEEK OF OCTOBER 1999	BY OCEAN	EXPORT STANDARD PACKING

ITEM	DESCRIPTION		QUANTITY (MT.)	UNIT PRICE / MT.	AMOUNT
1	EQUAL ANGLES	SSA-JP	200	$390.00	$78,000.00
	TOTAL		200		$78,000.00

This purchase order is subjected to the terms and conditions on the face and reverse side hereof in its entirely, and attachments.

LYS INTERTRADE CO., LTD.

LI WEI JUN

MANAGER

Figure F.17.   Purchase Order Form.

LYS INTERTRADE CO., LTD.

406 Moo 7, Suksawad 78, Suksawad Road, Bangjark, Prapradang, Samutprakarn 10130
Telephone : (02) 612-4576-80 Facsmile : (02) 612-7890

DELIVERY ORDER

DELIVERY ORDER NO. LYS-0021-02

DATE   AUGUST 21, 1999

MESSR: SIAM METAL PANICH CO., LTD.
57/64, SOI WATCHANNOK, RAMA 3 ROAD,
BANGKORLAEM, BANGKOK
10120

ATTN : MS. PANNEE VORAKITWATTANAKUL

OUR REFERENCE	PARTIAL DELIVERY	DESTINATION
SMP-0625-02	ALLOWED	WAREHOUSE AT RAMA 3 ROAD
REQUESTED DATE	DELIVERY METHOD	PACKING METHOD
SEPTEMBER 13, 1999	BY TRUCK	EXPORT STANDARD PACKING

ITEM	DESCRIPTION	QUANTITY (MT.)
1	EQUAL ANGLES SSA-JP	70
	TOTAL	70

DELIVERED BY :   **RECEIVED BY :**

Figure F.18.   Delivery Order Form.

91

APPENDIX   G

DATA DICTIONARY

Data Dictionary for Input Screen

Table G.1.   Data Dictionary for Login Menu Screen.

Field Name	Type	Length	Format
Login Name	Character	5	XXXXX
Password	Character	7	XXXXXXX

Screen Name : Main Menu

Group of system name that allows to select one choice from the following list:

- Sales and Support Information Systems

- Accounting Information Systems

- Inventory Information Systems

- Information Maintenance Systems

Screen Name : SSIS Main Menu

Group of system name that allows to select one choice from the following list :

-	Customer Information	-	Customers Orders
-	Suppliers Information	-	Purchase Order
-	Products Information	-	Delivery Order
-	Sales Representatives Information	-	Inventory Details
-	Sales Quotation	-	Report Menu

Table G.2.　Data Dictionary for Customers Information Input Screen.

Field Name	Type	Length	Format
Customer ID	Numeric	4	9999
Customer Name	Character	60	XXX.....
Customer Last Name	Character	60	XXX.....
Address	Character	80	XXXXXXX
Company Name	Character	30	XXX.....
Contact Title	Character	20	XXX.....
Phone Number	Character	11	XX-XXX-XXXX..
Fax Number	Character	11	XX-XXX-XXXX ..
Payment Terms	Character	10	XXX.....

Table G.3.　Data Dictionary for Suppliers Information Input Screen.

Field Name	Type	Length	Format
Supplier ID	Numeric	4	9999
Supplier Name	Character	60	XXX.....
Address	Character	60	XXX.....
Country	Character	15	XXXXXXX
Contact Name	Character	30	XXX.....
Contact Title	Character	20	XXX.....
Phone Number	Character	12	XX-XXX-XXXX..
Fax Number	Character	12	XX-XXX-XXXX ..
Payment Terms	Character	10	XXX.....
Lead Time	Character	10	XXX.....

Table G.4.   Data Dictionary for Products Information Input Screen.

Field Name	Type	Length	Format
Product ID	Numeric	4	9999
Product Code	Character	15	XXXX
Product Name	Character	20	XXX…..
Product Description	Character	40	XXXXXXX
Category	Character	15	XXX…..
Supplier Name	Character	60	XXX…..
Unit Price	Numeric (Currency)	10	99,999,999.99
Remark	Memo	300	XXX

Table G.5.   Data Dictionary for Sales Representatives Information Input Screen.

Field Name	Type	Length	Format
Sales Rep Id	Numeric (Currency)	2	99
First Name	Character	15	XXX…..
Last Name	Character	25	XXX…..
Title	Character	15	XXX…..
Phone Number	Character	10	XX-XXX-XXXX
Order On Hand	Character	20	XXX….
Remarks	Memo	200	XXX….

Table G.6. Data Dictionary for Sales Quotation Input Screen.

Field Name	Type	Length	Format
Quotation No	Numeric	6	999999
Customer Name	Character	60	XXX...
Customer Last Name	Character	60	XXX...
Company Name	Character	45	XXX...
Address	Character	60	XXX...
Phone Number	Character	11	XX-XXX-XXXX
Fax Number	Character	11	XX-XXX-XXXX
Contact Name	Character	30	XXX....
Sales Rep Name	Character	15	XXX...
Quotation Date	Date/Time	6	dd/mm/yy
Total Price	Numeric (Currency)	10	99,999,999.99

Table G.7. Data Dictionary for Quotation Details Input Screen.

Field Name	Type	Length	Format
Quotation ID	Numeric	3	999
Quotation No	Numeric	6	XXXXXX
Quotation Date	Date/Time	6	dd/mm/yy
Customer Name	Character	60	XXX.....
Product Code	Character	15	XXX.....
Unit Price	Numeric (Currency)	10	99,999,999.99
Quantity	Numeric	2	99
Total Price	Numeric (Currency)	10	99,999,999.99

Table G.8.   Data Dictionary for Customers Orders Input Screen.

Field Name	Type	Length	Format
Customer Name	Character	60	XXX...
Address	Character	60	XXX...
Pone Number	Character	11	XX-XXX-XXXX
Fax Number	Character	11	XX-XXX-XXXX
Contact Name	Character	30	XXX....
Sales Rep Name	Character	15	XXX....
Order Date	Date/Time	6	dd/mm/yy
Ship Date	Date/Time	6	dd/mm/yy
Total Sales	Numeric (Currency)	10	99,999,999.99
Total Payment	Numeric (Currency)	10	99,999,999.99
Due Date	Date/Time	6	dd/mm/yy

Table G.9.   Data Dictionary for Order Details Input Screen.

Field Name	Type	Length	Format
Order ID	Numeric	3	999
Customer PO No	Alpha Numeric	10	XXXXX-99999
Order Date	Date/Time	6	dd/mm/yy
Ship Date	Date/Time	6	dd/mm/yy
Product Code	Character	15	XXX...
Unit Price	Numeric (Currency)	10	99,999,999.99
Quantity	Numeric	2	99
Discount Rate	Numeric (Percent)	2	99%
PO Amount	Numeric (Currency)	10	99,999,999.99
Total Payment	Numeric (Currency)	10	99,999,999.99
Outstanding Amount	Numeric (Currency)	10	99,999,999.99

Table G.10.   Data Dictionary for Purchase Order Input Screen.

Field Name	Type	Length	Format
P/O	Numeric	5	99999
PO Date	Date/Time	6	dd/mm/yy
Supplier Name	Character	60	XXX.....
Address	Character	60	XXX.....
Phone Number	Character	11	XX-XXX-XXXX
Fax Number	Character	11	XX-XXX-XXXX
Contact Name	Character	30	XXX.....
Contact Title	Character	15	XXX.....
Payment Terms	Character	10	XXX.....
Order ID	Numeric	3	999
Order Date	Date/Time	6	dd/mm/yy
Ship Date	Date/Time	6	dd/mm/yy
Total Price	Numeric (Currency)	10	99,999,999.99

99

Table G.11. Data Dictionary for Purchase Order Details Input Screen.

Field Name	Type	Length	Format
Purchase Order ID	Numeric	3	999
P/O Number	AlphaNumeric	5	99999
Order Date	Date/Time	6	dd/mm/yy
Shipping Schedule	Date/Time	6	dd/mm/yy
Shipped Via	Character	10	XXX.....
Product Code	Character	15	XXX.....
Unit Price	Numeric (Currency)	10	99,999,999.99
Quantity	Numeric	2	99
Discount Rate	Numeric (Percent)	2	99
Selling Price	Numeric (Currency)	10	99,999,999.99

Table G.12. Data Dictionary for Delivery Order Input Screen.

Field Name	Type	Length	Format
Delivery ID	Numeric	3	999
D/O No.	Numeric	4	9999
Order ID	Numeric	3	999
Customer ID	Numeric	4	9999
Company Name	Character	60	XXX.....
Address	Character	60	XXX.....
Delivery Date	Date/Time	6	dd/mm/yy
Sales Rep First Name	Character	15	XXX.....

Table G.13.   Data Dictionary for Inventory Details Input Screen.

Field Name	Type	Length	Format
Inventory Record	Numeric	3	999
Category	Character	15	XXX.....
Product Code	Character	15	XXX.....
Product Name	Character	20	XXX.....
Product Desc	Character	40	XXX.....
Supplier Name	Character	60	XXX.....
Status	Character	20	XXX.....

Table G.14.   Data Dictionary for Payment Details Input Screen.

Field Name	Type	Length	Format
Payment ID	Numeric	3	999
Order ID	Numeric	3	999
Customer ID	Numeric	4	9999
Company Name	Character	60	XXX....
Payment Amount	Numeric (Currency)	10	99,999,999.99
Payment Date	Date/Time	10	dd/mm/yy
Payment Method	Character	10	XXX.....
Payment Terms	Character	10	XXX.....
Check Number	Numeric	6	999999
Bank Name	Character	15	XXX.....
Remark	Memo	300	XXX.....

Screen Name : Report Menu

Group of the system name that allows selecting one choice from the following list:

- Products and Price List by Suppliers

- Products and Price List by Categories

- Sales Quotation Report

- Customer Orders Report

- Product Purchased Report

- Inventory Report

- Suppliers List by Alphabet

- Customers List by Alphabet

- Sales Amount by Suppliers Report

- Sales Amount by Customer Report

- Sales Amount by Currency Report

- Total Sales Margin Report

- Top Ten Sales Volume Customers Report

- Customer Payment Summary Report

- Sales Representative Sales Report

- Sales Quotation Form

- Purchase Order Form

- Delivery Order Form

Table G.15.   Data Dictionary for Entering Parameter Value - Print Report Input

Screen.

Field Name	Type	Length	Format
From Date	Date/Time	6	dd/mm/yy
To Date	Date/Time	6	dd/mm/yy

Table G.16.   Data Dictionary for Entering Parameter Value - Sales Quotation Form

Input Screen.

Field Name	Type	Length	Format
From Date	Date/Time	6	dd/mm/yy
To Date	Date/Time	6	dd/mm/yy

Table G.17.   Data Dictionary for Entering Parameter Value - Purchase Order Form

Input Screen.

Field Name	Type	Length	Format
Number	Numeric	5	99999
Date	Date/Time	6	dd/mm/yy

Table G.18.   Data Dictionary for Entering Parameter Value – Delivery Order Form

Input Screen.

Field Name	Type	Length	Format
Number	Numeric	5	99999
Date	Date/Time	6	dd/mm/yy

Data Dictionary of Report / Output Forms

Table G.19. Data Dictionary for Alphabetical List of Customer Report.

Field Name	Type	Length	Format
Customer Name	Character	60	XXX.....
Address	Character	80	XXX.....
Phone Number	Character	11	XX-XXX-XXXX
Fax Number	Character	11	XX-XXX-XXXX
Contact Name	Character	30	XXX.....

Table G.20. Data Dictionary for Alphabetical List of Suppliers Report.

Field Name	Type	Length	Format
Supplier Name	Character	45	XXX.....
Address	Character	80	XXX.....
Country	Character	25	XX-XXX-XXXX
Phone Number	Character	11	XX-XXX-XXXX
Fax Number	Character	11	XXX.....
Contact Name	Character	30	XXX.....

Table G.21.   Data Dictionary for Product and Price List Classified by Suppliers Report.

Field Name	Type	Length	Format
Product Code	Character	15	XXX…..
Product Name	Character	30	XXX…..
Product Description	Character	40	XXX…..
Unit Price	Numeric (Currency)	10	99,999,999.99
Supplier Name	Character	30	XXX…..
Lead Time	Character	10	XXX…..

Table G.22.   Data Dictionary for Product and Price List Classified by Product

Categories Report.

Field Name	Type	Length	Format
Category	Character	15	XXX…..
Product Code	Character	15	XXX…..
Product Description	Character	40	XXX…..
Unit Price	Numeric (Currency)	10	99,999,999.99
Supplier Name	Character	30	XXX…..
Lead Time	Character	10	XXX…..

Table G.23.   Data Dictionary of Sales Quotation Report.

Field Name	Type	Length	Format
Currency	Character	3	XXX
Quotation No.	Numeric	6	999999
Date	Date/Time	6	dd/mm/yy
Customer Name	Character	40	XXX…..
Total Amount	Numeric (Currency)	10	99,999,999.99
Sales Rep Name	Character	15	XXX…..
Remarks	Memo	30	XXX…..

Table G.24.   Data Dictionary of Customer Order Report.

Field Name	Type	Length	Format
Currency	Character	3	XXX
Order ID	Numeric	3	999
Customer Order No	Alpha Numeric	12	XXX…..-999999
Order Date	Character	6	dd/mm/yy
Customer Name	Character	40	XXX…..
Customers' Requested Date	Date/Time	6	dd/mm/yy
Sales Rep Name	Character	15	XXX…..
Order Amount	Numeric (Currency)	10	99,999,999.99

106

Table G.25.   Data Dictionary of Product Purchased Report.

Field Name	Type	Length	Format
Currency	Character	3	XXX
PO ID	Numeric	3	999
PO No	Alpha Numeric	10	XXX.....-999999
PO Date	Date/Time	6	dd/mm/yy
Supplier Name	Character	40	XXX.....
Requested Delivery	Date/Time	6	dd/mm/yy
Sales Rep Name	Character	15	XXX....
PO Amount	Numeric (Currency)	10	99,999,999.99

Table G.26.   Data Dictionary of Inventory Report.

Field Name	Type	Length	Format
Product Code	Character	15	XXX....
Product Name	Character	25	XXX.....
Product Description	Character	40	XXX.....
Supplier Name	Character	20	XXX.....
Address	Character	20	XXX.....
Location	Numeric	2	99
Remarks	Memo	20	XXX.....

Table G.27.   Data Dictionary of Sales Amount by Suppliers Report.

Field Name	Type	Length	Format
Supplier Name	Character	30	XXX….
Product Code	Character	15	XXX…..
Product Name	Character	25	XXX…..
Unit Sold	Numeric	3	999
Unit Price	Numeric (Currency)	10	99,999,999.99
Sales Amount	Numeric (Currency)	10	99,999,999.99

Table G.28.   Data Dictionary of Sales Amount by Customer Report.

Field Name	Type	Length	Format
Customer Name	Character	60	XXX….
Order ID	Numeric	3	999
PO No.	Alpha Numeric	12	XXX…..999999
Order Date	Date/Time	6	dd/mm/yy
Supplier Name	Character	30	XXX…..
Amount	Numeric (Currency)	10	99,999,999.99
Sales Rep Name	Character	15	XXX…..

Table G29.   Data Dictionary of Sales Amount by Currency Report.

Field Name	Type	Length	Format
Currency	Character	3	XXX
Order Date	Date/Time	6	dd/mm/yy
Delivery Date	Date/Time	6	dd/mm/yy
Supplier Name	Character	30	XXX…..
Customer Name	Character	30	XXX…..
Amount	Numeric (Currency)	10	99,999,999.99
Remarks	Memo	30	XXX…..

Table G.30.   Data Dictionary of Sales Amount by Sales Representative Report.

Field Name	Type	Length	Format
Sales Rep Name	Character	15	XXX…..
Order ID	Numeric	3	999
Supplier Name	Character	30	XXX…..
Customer Name	Character	30	XXX…..
Currency	Character	3	XXX
Amount Sales	Numeric (Currency)	10	99,999,999.99

109

Table G.31.   Data Dictionary of Total Monthly Sales Margin Report.

Field Name	Type	Length	Format
Month	Character	10	XXX....
Sold To	Character	50	XXX.....
Cost	Numeric (Currency)	10	99,999,999.99
Selling Price	Numeric (Currency)	10	99,999,999.99
Amount	Numeric (Currency)	10	99,999,999.99

Table G.32.   Data Dictionary of Top Ten Sales Volume of Customers.

Field Name	Type	Length	Format
Month	Character	10	XXX....
Customer	Character	30	XXX.....
Order Amount	Numeric (Currency)	10	99,999,999.99

Table G.33.   Data Dictionary of Customer Payments Summary Report.

Field Name	Type	Length	Format
Date	Date/Time	6	dd/mm/yy
Order ID	Numeric	3	999
Customer Name	Character	40	XXX.....
Payment Amount	Numeric (Currency)	10	99,999,999.99
Check No	Numeric	6	9999999
Bank Name	Character	20	XXX

Table G.34.   Data Dictionary of Quotation Form.

Field Name	Type	Length	Format
Quotation No	Numeric	6	999999
Date	Date/Time	6	dd/mm/yy
MESSRS	Character	60	XXX…..
Attn	Character	30	XXX…..
Incoterms	Character	25	XXX…..
Payment Terms	Character	25	XXX…..
Port of Destination	Character	25	XXX…..
Reference	Character	25	XXX…..
Delivery Method	Character	25	XXX…..
Delivery Period	Character	25	XXX…..
Insurance	Character	25	XXX…..
Validity	Character	25	XXX…..
Partial Delivery	Character	15	XXX…..
Option	Character	10	XXX…..
Packing Method	Character	25	XXX…..
Item	Character	2	XXX…..
Product Code	Numeric	15	999….
Description	Character	40	XXX….
Unit Price	Numeric (Currency)	10	99,999,999.99
Qty	Numeric	3	9,999
Amount	Numeric (Currency)	10	99,999,999.99
Total Amount	Numeric (Currency	10	99,999,999.99

Table G.35.   Data Dictionary of Purchase Order Form.

Field Name	Type	Length	Format
Purchase Order No.	Numeric	6	999999
Date	Date/Time	6	dd/mm/yy
MESSRS	Character	60	XXX.....
Attn	Character	30	XXX.....
Incoterms	Character	25	XXX.....
Payment Terms	Character	10	XXX.....
Port of Destination	Character	25	XXX.....
Insurance	Character	25	XXX.....
Requested Date	Character	25	XXX.....
Delivery Method	Character	25	XXX.....
Packing Method	Character	25	XXX.....
Item	Numeric	2	99
Product Code	Character	15	XXX.....
Description	Character	60	XXX.....
Unit Price	Numeric (Currency)	6	9,999.99
Qty	Numeric	3	999
Amount	Numeric (Currency)	10	99,999,999.99
Total Amount	Numeric (Currency)	10	99,999,999.99

Table G.36.   Data Dictionary of Delivery Order Form.

Field Name	Type	Length	Format
Delivery Order No	Numeric	6	999999
Date	Date/Time	6	dd/mm/yy
MESSRS	Character	60	XXX…..
Attn	Character	30	XXX…..
Our Reference	Character	10	XXX…..
Partial Delivery	Character	20	XXX…..
Destination	Character	20	XXX…..
Requested Date	Date/Time	6	dd/mm/yy
Delivery Method	Character	25	XXX…..
Packing Method	Character	25	XXX…..
Item	Numeric	2	99
Product Code	Character	10	XXX…..
Description	Character	15	XXX…..
Quantity	Numeric	4	9,999
Total Quantity	Numeric	4	9,999

APPENDIX   H

PROCESS SPECIFICATION

Process 1.1.   Receive Customer Requirements.

BEGIN

      FIND   Customer_Name in CUSTOMERS

      IF   Customer_Name not found;

            THEN Cutomer_ID = the next available Customer ID

            ACCEPT Customers Details

END IF;

      GOTO   Sales Orders

      Sales Orders ID = the next available Sales Orders ID

      ACCEPT Orders Details

SEND Product Details and Customer Details

GOTO   Process 1.2.

END

115

Process 1.2.   Issue Quotation.

BEGIN

Quotation_No = the next available Quotaion No.

GET   Customer Details from CUSTOMERS

GET   Product Details from PRODUCTS

Calculate Sales Total = Multiple Quantity by Unit_Price

GOTO Next Items

IF Items Number appears; THEN GOTO Line 4

IF No Items Number; THEN Total Amount = Sum Sales Total

SEND to QUOTATIONS

GOTO Process 1.3.

END

Process 1.3.   Submit Quotation.

BEGIN

GET Sales Quotation from QUOTATIONS

VERIFY   Product Code, Unit Price, Sales Total, Total Amount

PRINT   Sales Quotation

END

116

Process 1.4.   Produce Sales Quotation Report.

BEGIN

    Report Date = the Current Date

    Total_Amont = 0

    Do WHILE there are more Quotations in QUOTATION with Quotation_Date in

        this month

    READ next Quotation with Quotation_Date

    ADD Quotation_Number, Customer_Name, Total-Amount, Sales

        Representatives as a new line in Sales Quotation Report

    ADD Quotation_Number, Customer_Name, Total-Amount, Sales

        Representatives as a new line in Sales Quotation Report

        ADD Total Amount to Total Quotation Amount

    END DO

    ADD Total Amount as a new line to Sales Quotation Report

    PRINT Sales Quotation Report

END

Process 2.1.   Receive Customer Orders.

BEGIN

    Order Id = the next available Order ID

    GET   Customer_Name, Address, Contact_Name

    ADD   Order Details in CUSTOMER ORDERS

END

Process 2.2.   Verify Customer Orders.

BEGIN

       GET Customer Order Details from CUSTOMER ORDERS

       CHECK Product Details

       GOTO Process 2.3.

END

Process 2.3.   Check Products in Stock.

BEGIN

       Product Number = the next available Product Number

       Date = Current Date

       GET Products Details from PRODUCTS

       CREATE Product-in Hand Details, Record Product Code, Product Name, QTY,

           Unit Price and Total Price

       PRINT Product-in Hand Details

END

Process 2.4.   Confirm Customer Order.

BEGIN

       GET Confirmation from Overseas Suppliers

       SEND Confirmation Details to Customers

END

Process 2.5.   Response out of Stock.

BEGIN

      GET Stock in Hand from INVENTORY

      IF Items Number appears; THEN GOTO Line 4

      IF No Items Number; THEN Inventory Quantity = SUM Inventory Quantity

      SEND to INQUIRY

      GOTO Process 2.6.

END

Process 2.6.   Issue Purchase Orders.

BEGIN

      PO_Number = the next available PO_Number

      Date = Current Date

      Get Overseas Suppliers Details from OVERSEAS SUPPLIERS

      CREATE Purchase Order Details Record Product Code, Product Name,

            Quantity, Unit Price and Total Price

      PRINT Purchase Order

END

Process 2.7.   Confirm Customer Orders.

BEGIN

      Get Confirmation from Overseas Suppliers

      SEND Confirmation Details to Customers

END

Process 2.8.   Produce Sales Report.

BEGIN

      Report Date = the Current Date

      Total_Amount = 0

      DO WHILE there are more Sales Order in SALES ORDER with Sales Order

      Date in this month

            READ next Sales Order with Sales Order Date

            ADD Sales Order Number, Customers_Name, Ship_Date,

                  Sales Representatives, Sales Order Amount as a new line in

                  Product Sales Report

            ADD Total Amount to Total Sales Amount

      END DO

      ADD Total Amount as a new line to Customer Orders Report

      PRINT   Customer Orders Sales Report

END

Process 2.9.   Produce Purchase Report.

BEGIN

      Report Date = the Current Date

      Total_Amount = 0

      DO WHILE there are more Purchase Order in PURCHASE ORDER with

      P/O_Date in this month

            READ next Purchase Order with P/O_Date

ADD P/O_Number, Overseas Suppliers_Name, Ship_Date, Sales

Representaives, P/O_Amount as a new line in Product Purchased

Report

ADD Total Amount to Total P/O_Amount

END DO

ADD Total Amount as a new line to Overseas Suppliers Orders Report

PRINT   Overseas Suppliers Orders Report

END

Process 3.1.   Add New Inventory.

BEGIN

GET Product Details

ADD Product Code, Product Name, Product Description, Status to

INVENTORY

END

Process 3.2.   Produce Inventory Reports.

BEGIN

    REPEAT UNTIL there are no more Products in PRODUCTS

    READ next Products in PRODUCTS

    REPEAT until there are no more Inventory Items in INVENTORY with

        Product_Code that matches Product_Code in Product

    ADD Product_Code, Product_Name Status to next line of Inventory Report

    END REPEAT

END REPEAT

PRINT   Inventory Report

Process 4.1.   Verify Sales Orders.

BEGIN

    Sales Orders Number = the next available Sales Orders Number

    DATA IN   Date, Sales_Representatives_Name, Orders_No,

        Customer_Name, Location, Start_Date, End_Date, to SALES

        ORDERS

    DATA OUT   Sales Orders

    PRINT   Sales Orders Form

END

Process 4.2.   Matching Products.

BEGIN

GOTO INVENTORY

FIND Warehouse

READ Inventory-on-Hand

GOTO ORDERS

READ Sales Order No., Sales_Representatives_Name

IF Sales_Representatives_Name = First_Name in line 3;

THEN GOTO SALES REPRESENTATIVES

END IF

REPEAT line 3

END REPEAT

GOTO Process 4.3.

END

Process 4.3.   Produce Delivery Orders.

BEGIN

Delivery Order Number = the next available Delivery Order Number

DATA IN   Delivery_Order_Number

DISPLAY Delivery Order Details = Delivery Order Request Details

DATA OUT   Delivery Order

PRINT Delivery Order Form

END

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